

Super Power Series Book

For
5th
Standard

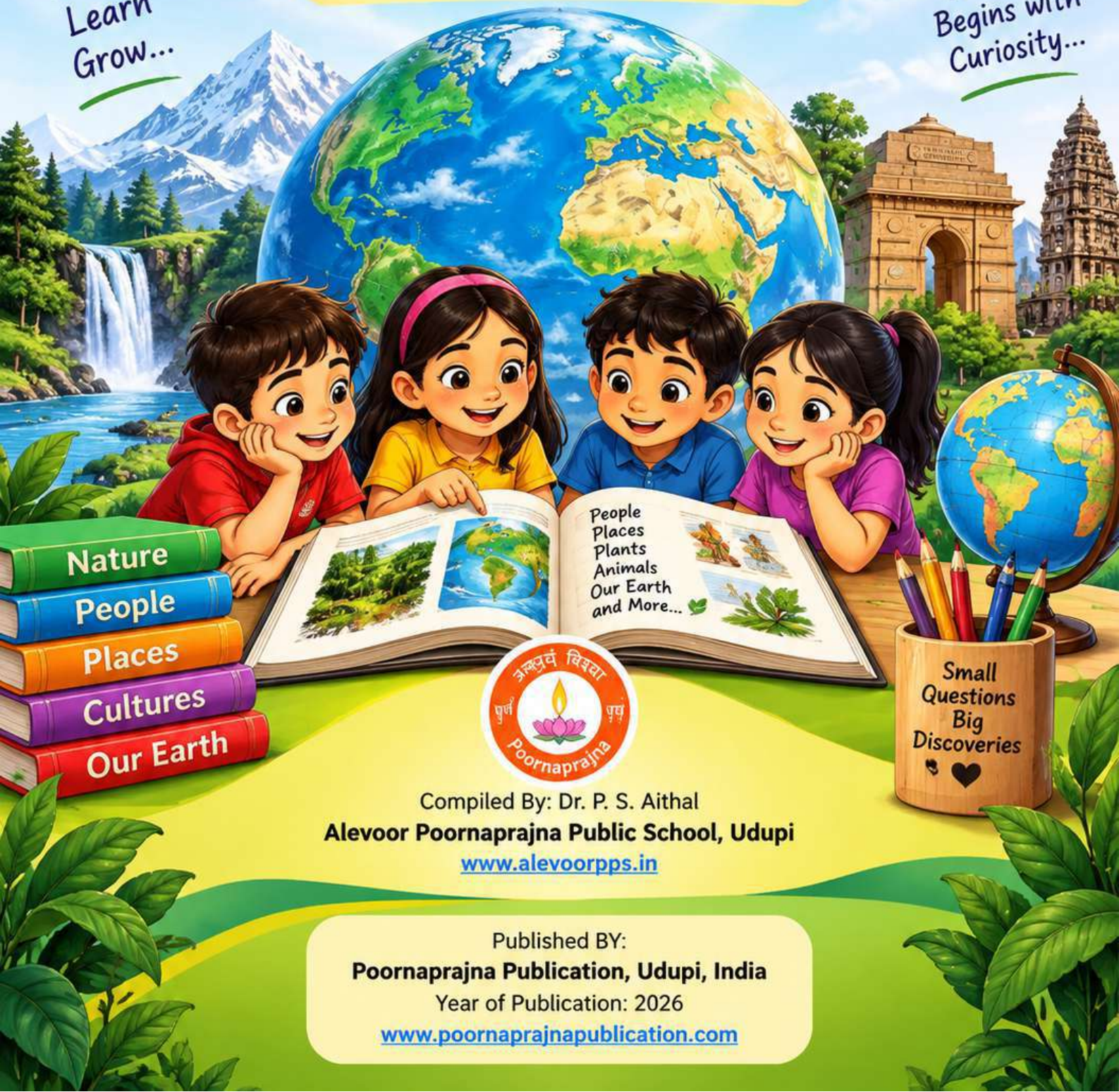
CURIOSITY FOR YOUNG MINDS

Study Material BOOK for 5th Standard
World-Around-Us Subject

Based on NCERT/CBSE Curriculum

Explore
Discover
Learn
Grow...

A
Brighter
Tomorrow
Begins with
Curiosity...



Compiled By: Dr. P. S. Aithal

Alevoor Poornaprajna Public School, Udupi

www.alevoorpps.in

Published BY:

Poornaprajna Publication, Udupi, India

Year of Publication: 2026

www.poornaprajnapublication.com

Super Power Series Book

CURIOSITY FOR YOUNG MINDS

**Study Material BOOK for 5th Standard World-Around-Us
Subject**

Based on NCERT/CBSE Curriculum



Compiled By: Dr. P. S. Aithal

Alevoor Poornaprajna Public School, Udupi

www.alevoorpps.in

Published BY:

Poornaprajna Publication, Udupi, India

Year of Publication: 2026

ISBN: 978-81-17181-02-7

DOI: <https://doi.org/10.5281/zenodo.22710501>

www.poornaprajnapublication.com

CURIOSITY FOR YOUNG MINDS

Study Material BOOK for 5th Standard World-Around-Us Subject

(Prepared as per Poornaprajna Integrated Student Support Model)

CONTENTS

Cha. No.	Chapters	Page No.
-	Preface	01
1	Water—The Essence of Life	01-32
2	Journey of a River	01-25
3	The Mystery of Food	01-32
4	Our School – A Happy Place	01-35
5	Our Vibrant Country	01-36
6	Some Unique Places	01-36
7	Energy — How Things Work	01-36
8	Clothes — How Things are Made	01-32
9	Rhythms of Nature	01-31
10	Earth — Our Shared Home	01-34

Published BY:

Poornaprajna Publication, Udupi, India

Year of Publication: September, 2026

ISBN: 978-81-17181-02-7

DOI: <https://doi.org/10.5281/zenodo.22710501>

www.poornaprajnapublication.com

PREFACE

Education at the primary level should not merely prepare children to answer questions in an examination; it should nurture **curiosity, conceptual understanding, critical thinking, application skills, and a lifelong interest in learning**. With this objective, *Curiosity for Young Minds – Study Material Book for 5th Standard World-Around-Us* has been developed for **Grade 5 students following the CBSE curriculum**. The book prepared with the help of AI-driven GPTs, provides structured academic support that strengthens classroom learning while helping students prepare confidently for **school examinations as well as competitive examinations such as Olympiads**. The chapters address important themes related to water, rivers, food, India, unique places, energy, clothing, nature, and the Earth, thereby encouraging children to understand and appreciate the world around them.

A distinctive feature of this book is that it has been developed in accordance with the **Poornaprajna Integrated Student Service Model**, which seeks to provide systematic and comprehensive learning support to every student. The model integrates **chapter summaries, fill-in-the-blanks, one-mark, two-mark, three-mark and five-mark questions**, together with opportunities for discussion, presentation, figures, tables, and classroom interaction. It places special emphasis on **applied questions, practical and experiential learning**, enabling students to move beyond memorisation and connect classroom concepts with situations in everyday life. The study material further incorporates questions based on both **Lower Order Thinking Skills (LOTS)** and **Higher Order Thinking Skills (HOTS)**, encouraging learners not only to remember and understand concepts but also to **apply, analyse, predict, compare, infer, and solve problems**.

The book also aims to bridge the gap between **curriculum-based learning and competitive-examination readiness**. Multiple-choice questions are included and discussed specifically with **Olympiad examinations** in view, while applied questions and experiential activities encourage independent thinking and problem-solving. Through this integrated approach, we hope that the book will serve as a valuable companion to **students, teachers, and parents**, making learning more systematic, engaging, meaningful, and enjoyable. Above all, we hope it inspires every young learner to **ask questions, explore ideas, think deeply, apply knowledge confidently, and experience the joy of discovery**—the true spirit of *Curiosity for Young Minds*.

Dr. P. S. Aithal

(www.psaithal.in)

5th Standard World Around Us Book Chapter 1

Chapter 1: Water—The Essence of Life

Summary – Chapter 1: Water—The Essence of Life:

- (1) **Water is essential for life:** All living beings—humans, animals, birds, and plants—depend on freshwater. It is needed for drinking, growing crops, daily activities, and supporting ecosystems.
- (2) **Freshwater is limited:** Although most of the Earth's surface is covered with water, most of it is salty. Only a very small amount is available as freshwater for living beings.
- (3) **Water exists in three forms:** Water occurs as **liquid** (rain/water), **solid** (ice or snow), and **vapour** (steam). Water can change from one form to another.
- (4) **The water cycle keeps water moving:** The Sun's heat changes water from oceans, rivers, and other sources into water vapour. It forms clouds and returns to Earth as **rain, snow, or hail**, completing the continuous **water cycle**.
- (5) **Groundwater is stored below the Earth:** Some rainwater seeps through soil and rocks and gets stored underground as **groundwater**. Wells, borewells, tube wells, and handpumps are used to obtain this water.
- (6) **Groundwater needs to be recharged:** Open land, soak pits, ponds, human-made lakes, and trees help rainwater seep into the ground. Cemented surfaces reduce groundwater recharge because they prevent water from entering the soil.
- (7) **Rivers, lakes, and ponds provide surface water:** Rivers often begin in mountains and flow from higher to lower areas. Their direction and movement depend on the shape and slope of the land, and flowing water can also change the shape of the land.
- (8) **Freshwater habitats support many living organisms:** Ponds, lakes, and rivers provide habitats for fish, frogs, turtles, water snakes, birds, insects, and many kinds of aquatic plants. These organisms have special features that help them survive in and around water.
- (9) **Aquatic plants and animals have special adaptations:** Features such as **fins, floating leaves, long roots, and waterproof or waxy leaves** help organisms live successfully in freshwater habitats.
- (10) **Water must be conserved:** Freshwater is a precious and limited resource that supports humans, plants, animals, and entire ecosystems. Therefore, we should **save water, recharge groundwater, protect water bodies, and use water wisely**.

1.2 Important Formulas:

The Chapter 1 is mainly **conceptual and activity-based** and does **not prescribe specific mathematical formulas** for numerical problem-solving. It deals with freshwater availability, forms of water, the water cycle, groundwater, surface water, rivers, and aquatic life.

However, the following **basic mathematical relationships** can be useful for quantitative or application-based problems developed from the chapter:

1. Percentage of Water:

$$\text{Percentage} = (\text{Part} \div \text{Total}) \times 100$$

Useful for calculating the percentage of freshwater, saltwater, groundwater, or water used/saved.

2. Amount of Freshwater:

$$\text{Freshwater} = \text{Total Water} - \text{Saltwater}$$

3. Water Remaining:

$$\text{Water Remaining} = \text{Initial Quantity} - \text{Water Used}$$

4. Total Water Used:

Total Water Used = Water Used per Person × Number of People

5. **Water Saved:**

Water Saved = Normal Water Use – Reduced Water Use

6. **Percentage of Water Saved:**

Water Saved (%) = (Water Saved ÷ Original Water Use) × 100

7. **Total Water Collected:**

Total Water Collected = Water Collected per Container × Number of Containers

8. **Basic Volume Conversion:**

1 litre (L) = 1000 millilitres (mL)

1 mL = 0.001 L

This is particularly useful because the chapter uses quantities such as **200 mL of water** and **5 mL of freshwater** to illustrate how little freshwater is available.

9. **Fraction of Freshwater in the Chapter's Illustration:**

Fraction = Freshwater Quantity ÷ Total Water Quantity

Using the illustration:

Fraction = $5 \div 200 = 1/40$

Therefore, for this *illustrative model*, **Percentage = $(5 \div 200) \times 100 = 2.5\%$** . This should be treated as a classroom illustration, not as a precise statement of Earth's freshwater percentage.

10. **Average Water Use:**

Average Water Use = Total Water Used ÷ Number of Days

This can be used for problems involving daily household or school water consumption.

Important Note for Question-Bank Preparation

For **5th Standard**, Chapter 1 does not require students to memorise scientific equations. Quantitative questions should preferably focus on **litres and millilitres, addition/subtraction of water quantities, fractions, percentages, comparison of quantities, daily water consumption, and water conservation**. The central scientific concepts remain the **three forms of water and the water cycle**, rather than mathematical calculations.

1.3 Fill-Up the Blank LOTS type questions with Answers: (30 Questions)

LOTS Type – Fill in the Blanks with Answers:

Chapter 1: Water—The Essence of Life

- Most of the water present on Earth is _____.
Answer: salty
- All living beings depend on _____ for survival.
Answer: freshwater
- Water in the form of ice is called the _____ form of water.
Answer: solid
- Rain is an example of the _____ form of water.
Answer: liquid
- Steam is the _____ form of water.
Answer: vapour
- The Sun's _____ causes water to turn into water vapour.
Answer: heat
- When water vapour cools, it forms small water _____.
Answer: droplets
- Water vapour forms _____ in the sky.
Answer: clouds
- The constant circular movement of water in nature is called the _____.
Answer: water cycle

10. Water that gets stored deep underground is called _____.
Answer: groundwater
11. We can draw groundwater using _____ and borewells.
Answer: wells
12. Open and uncovered areas allow rainwater to _____ into the ground.
Answer: seep
13. Soak pits, ponds and planting more _____ help recharge groundwater.
Answer: trees
14. Rivers, ponds and lakes are natural sources of _____ water.
Answer: surface
15. A river often begins its journey from the _____.
Answer: mountains
16. Water flows according to the _____ of the land formations in its path.
Answer: shape
17. The flow of water can also change the shape of the _____.
Answer: land
18. Some Indian rivers flow into the Bay of Bengal, while others flow into the _____ Sea.
Answer: Arabian
19. A dragonfly lays its eggs near _____.
Answer: water
20. A water scorpion breathes using a _____ tube.
Answer: tail
21. A pond heron has _____ legs that help it catch fish.
Answer: long
22. A freshwater turtle lives in ponds and _____.
Answer: rivers
23. A water snake eats fish and _____.
Answer: frogs
24. Reeds commonly grow along the _____ of ponds.
Answer: edges
25. The flowers of lotus and water lily _____ on water.
Answer: float
26. The roots of lotus and water lily remain in the _____ bed.
Answer: pond
27. Water hyacinth is a _____-floating plant.
Answer: free
28. The waxy coating on leaves makes them _____.
Answer: waterproof
29. Aquatic animals such as fish have _____ that help them swim.
Answer: fins
30. Freshwater habitats support a rich variety of plants and _____.
Answer: animals

These questions are **LOTS (Lower Order Thinking Skills)** because they mainly test **recall, recognition, identification, and basic understanding** of facts and terms directly presented in the chapter.

1.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)

HOTS Type – Fill in the Blanks with Answers:

The following questions require students to **apply, analyse, predict, compare, and infer** using concepts from the chapter.

1. If a city has mostly cemented surfaces, the recharge of _____ will decrease.
Answer: groundwater
2. If more open spaces are converted into concrete roads, less rainwater will _____ into the soil.
Answer: seep
3. A school wanting to increase groundwater recharge should create more _____ instead of covering all its land with concrete.
Answer: open/uncovered areas
4. If many trees are planted in an open area, more rainwater can return _____.
Answer: underground
5. If water vapour in the atmosphere cools, it will form tiny water _____.
Answer: droplets
6. If the Sun continuously heats water in a pond, some of the water will change into water _____.
Answer: vapour
7. If water vapour forms clouds and later falls back to Earth, this process is part of the _____.
Answer: water cycle
8. Without the Sun's heat, the conversion of surface water into water vapour would be greatly _____.
Answer: reduced
9. If ice cubes are kept outside for some time, they change from the solid state into the _____ state.
Answer: liquid
10. When water is heated sufficiently, it changes from liquid water into _____.
Answer: steam / water vapour
11. If a river encounters different slopes and land formations, its path may _____ instead of remaining straight.
Answer: curve
12. Water flowing continuously over land can gradually change the _____ of the land.
Answer: shape
13. Rivers beginning in mountains generally move from _____ ground towards lower ground.
Answer: higher
14. If the shape and slope of land change, the direction in which water _____ may also change.
Answer: flows
15. If all the fish disappeared from a freshwater habitat, animals that depend on fish for food would find it difficult to get _____.
Answer: food
16. The disappearance of one organism from a river food chain can affect other organisms because living beings are _____ on one another for food.
Answer: dependent
17. A plant with leaves floating on the surface but roots fixed to the pond bed could be a _____.
Answer: lotus / water lily

18. A plant floating freely without its roots fixed to the pond bed could be _____.
Answer: water hyacinth
19. If a leaf has a waxy coating, water is less likely to _____ into it.
Answer: enter
20. The waxy coating of an aquatic plant's leaves protects the plant from being damaged by too much _____.
Answer: water
21. An animal with fins is better adapted for movement in _____ than on land.
Answer: water
22. A bird with long legs and a long, pointed beak, seen standing near a pond to catch fish, could be a _____.
Answer: pond heron
23. If a freshwater pond dries completely, the plants and animals depending on it will lose their _____.
Answer: habitat
24. If rainfall does not occur for a long period, the amount of water available in ponds, rivers and groundwater is likely to _____.
Answer: decrease
25. Compared with a concrete-covered city, rainwater in an area with uncovered soil can more easily _____ into the ground.
Answer: seep
26. If people continuously use groundwater without allowing sufficient recharge, the amount of groundwater available is likely to _____.
Answer: decrease
27. A pond containing fish, frogs, insects, birds and aquatic plants demonstrates that freshwater supports a rich variety of _____.
Answer: life
28. If freshwater becomes unavailable, both terrestrial and aquatic organisms that depend on it would find _____ difficult.
Answer: survival
29. If a school wants to conserve water wisely, allowing rainwater to return underground would help in _____ **recharge**.
Answer: groundwater
30. Since only a limited amount of Earth's water is freshwater, it should be used _____.
Answer: wisely

1.5 One-mark questions with Answers of LOTS Type: (30 Questions)

LOTS Type – One-Mark Descriptive Questions with Answers:

1. **Why is freshwater important for living beings?**
Answer: Freshwater is essential for the survival of people, animals, birds, and plants.
2. **Mention any two uses of freshwater.**
Answer: Freshwater is used for drinking and growing crops.
3. **What are the three forms of water?**
Answer: The three forms of water are solid, liquid, and vapour.
4. **What is the solid form of water called?**
Answer: Ice or snow is the solid form of water.
5. **What is the vapour form of water called?**
Answer: Steam is the vapour form of water.

6. **What happens to ice when it is left at room temperature?**
Answer: Ice melts and changes into liquid water.
7. **What happens when water is heated?**
Answer: When water is heated, it changes into water vapour or steam.
8. **What causes water to turn into water vapour in nature?**
Answer: The Sun's heat causes water to turn into water vapour.
9. **What happens when water vapour cools?**
Answer: When water vapour cools, it forms small water droplets.
10. **What is the water cycle?**
Answer: The constant circular movement of water in nature is called the water cycle.
11. **What is groundwater?**
Answer: Water stored deep underground after seeping through soil and rocks is called groundwater.
12. **Name any two ways of drawing groundwater.**
Answer: Wells and borewells are two ways of drawing groundwater.
13. **What is groundwater recharge?**
Answer: Groundwater recharge is the process by which rainwater seeps into the ground and replenishes underground water.
14. **Name any two structures that help groundwater recharge.**
Answer: Soak pits and ponds help groundwater recharge.
15. **What is surface water?**
Answer: Water found on the Earth's surface in rivers, ponds, and lakes is called surface water.
16. **Where does a river often begin its journey?**
Answer: A river often begins its journey in the mountains.
17. **What determines the path of flowing water?**
Answer: The shape of the land formations determines the path of flowing water.
18. **How can flowing water affect land?**
Answer: Flowing water can change the shape of the land.
19. **Name the two seas towards which major Indian rivers shown in the chapter may flow.**
Answer: The rivers may flow towards the Bay of Bengal or the Arabian Sea.
20. **Where does a freshwater turtle live?**
Answer: A freshwater turtle lives in ponds and rivers.
21. **What does a water snake eat?**
Answer: A water snake eats fish and frogs.
22. **How does a water scorpion breathe underwater?**
Answer: A water scorpion breathes underwater using a tail tube.
23. **How does a pond heron catch its food?**
Answer: A pond heron stands still on its long legs to catch fish.
24. **Where do reeds grow?**
Answer: Reeds grow along the edges of ponds.
25. **Where are the roots of lotus and water lily found?**
Answer: The roots of lotus and water lily remain in the pond bed.
26. **What type of aquatic plant is water hyacinth?**
Answer: Water hyacinth is a free-floating aquatic plant.
27. **Why do some aquatic plants have a waxy coating on their leaves?**
Answer: The waxy coating makes the leaves waterproof and prevents too much water from entering the plant.

28. **What special feature helps fish move through water?**

Answer: Fins help fish move through water.

29. **What is a freshwater habitat?**

Answer: A freshwater habitat is a water environment where freshwater plants and animals live.

30. **Why is freshwater essential for aquatic life?**

Answer: Freshwater provides a habitat in which many aquatic plants and animals survive and grow.

1.6 One-mark questions with Answers of HOTS Type: (30 Questions)

1. **Why would life become difficult if freshwater sources disappeared?**

Answer: Life would become difficult because humans, animals, birds, and plants depend on freshwater for survival.

2. **Why should we use freshwater carefully even though Earth has plenty of water?**

Answer: We should use freshwater carefully because most of Earth's water is salty and only a small amount is freshwater.

3. **What would happen to an ice cube if it were kept outside the refrigerator for some time?**

Answer: The ice cube would melt and change from solid ice into liquid water.

4. **What would happen to water kept in sunlight for a long time?**

Answer: Some of the water would change into water vapour due to the Sun's heat.

5. **Why do water droplets form on a cool surface?**

Answer: Water droplets form because water vapour cools and changes into liquid droplets.

6. **What might happen to the water cycle if there were no heat from the Sun?**

Answer: The water cycle would be disrupted because the Sun's heat helps water change into water vapour.

7. **Why does rainwater eventually return to rivers, lakes, and oceans?**

Answer: Rainwater returns to water bodies as part of the continuous movement of water in the water cycle.

8. **Why is an open ground better than a concrete road for groundwater recharge?**

Answer: Open ground allows rainwater to seep into the soil more easily than a concrete road.

9. **What may happen to groundwater if an entire neighbourhood is covered with cement?**

Answer: Groundwater recharge may decrease because rainwater cannot easily seep into the ground.

10. **How can planting more trees help groundwater?**

Answer: Planting more trees helps rainwater return underground and supports groundwater recharge.

11. **Why would digging a soak pit be useful in a school campus?**

Answer: A soak pit would help rainwater seep into the ground and recharge groundwater.

12. **Why does a river not always flow in a straight line?**

Answer: A river may curve because its flow follows the shape of the land formations in its path.

13. **How can flowing river water change the land over time?**

Answer: Continuous flowing water can gradually change the shape of the land.

14. Why can rivers in India flow towards different seas?

Answer: Rivers can flow in different directions because their paths are influenced by the shape and slope of the land.

15. What might happen to aquatic animals if a pond completely dries up?

Answer: Aquatic animals may lose their habitat and find it difficult to survive.

16. Why are fins useful to fish but not necessary for most land animals?

Answer: Fins are useful to fish because they help them move through water.

17. Why are the long legs of a pond heron useful near water?

Answer: Its long legs help the pond heron stand in shallow water while catching fish.

18. How can you identify a lotus as a rooted floating plant?

Answer: A lotus can be identified because its flowers float on water while its roots remain fixed in the pond bed.

19. How is water hyacinth different from lotus and water lily?

Answer: Water hyacinth floats freely, whereas lotus and water lily have roots fixed in the pond bed.

20. Why is a waxy coating useful to the leaves of aquatic plants?

Answer: A waxy coating makes the leaves waterproof and prevents too much water from entering them.

21. What could happen to a pond food chain if all the small fish disappeared?

Answer: Animals that depend on small fish for food could face a shortage of food.

22. Why can the disappearance of one animal affect other animals in a freshwater habitat?

Answer: The disappearance of one animal can affect others because organisms depend on one another for food.

23. Why might a pond attract many different kinds of birds and animals?

Answer: A pond provides water, food, and habitat for many different living organisms.

24. What may happen to ponds and groundwater if an area receives no rain for a long period?

Answer: The amount of water in ponds and groundwater is likely to decrease.

25. Why would rainwater behave differently in a forest and a heavily cemented city?

Answer: More rainwater can seep into the soil in a forest, while cemented surfaces in cities prevent easy seepage.

26. Why should we avoid disturbing plants and animals while visiting a pond?

Answer: We should avoid disturbing them so that their natural freshwater habitat remains protected.

27. How would excessive use of groundwater without recharge affect people?

Answer: Excessive use without recharge could reduce the groundwater available for human use.

28. Why are freshwater habitats important for biodiversity?

Answer: Freshwater habitats support a rich variety of plants and animals with special features for living in water.

29. What can a school do to allow more rainwater to enter the ground?

Answer: A school can maintain open areas, create soak pits, and plant more trees to encourage groundwater recharge.

30. Why is conserving water important for both humans and other living organisms?

Answer: Conserving water is important because freshwater is essential for the survival of humans, plants, animals, and aquatic life.

1.7 Two-mark questions with Answers of LOTS Type: (20 Questions)

1. Why is freshwater important for living beings?

Answer:

1. Freshwater is essential for the survival of people, animals, birds, and plants.
2. It is needed for drinking, growing crops, and carrying out daily activities.

2. Name and explain the three forms of water.

Answer:

1. Water occurs as **liquid** in rain and as **solid** in ice or snow.
2. It also occurs as **vapour**, such as steam.

3. What happens to ice when it is kept outside for some time?

Answer:

1. Ice absorbs heat from its surroundings and begins to melt.
2. It changes from the solid form into liquid water.

4. What happens when water is heated?

Answer:

1. On heating, liquid water changes into water vapour or steam.
2. Thus, water can change from one form to another when heated.

5. What happens to water during the water cycle?

Answer:

1. The Sun's heat changes water from oceans and rivers into water vapour.
2. The vapour forms clouds and returns to Earth as rain, snow, or hail.

6. What is groundwater and how is it formed?

Answer:

1. Some rainwater seeps through the layers of soil and rocks.
2. The water stored deep underground is called **groundwater**.

7. How do people obtain groundwater?

Answer:

1. People dig wells, borewells, and tube wells to reach groundwater.
2. Handpumps are also used to draw groundwater for our use.

8. How do open areas help in groundwater recharge?

Answer:

1. Open and uncovered areas allow rainwater to seep into the ground.
2. This water moves underground and helps replenish groundwater.

9. Mention two ways of improving groundwater recharge.

Answer:

1. Soak pits, ponds, and human-made lakes can help rainwater enter the ground.
2. Planting more trees also helps rainwater return underground.

10. What is surface water? Give examples.

Answer:

1. Water available naturally on the Earth's surface is called **surface water**.
2. Rivers, ponds, and lakes are examples of natural freshwater sources.

11. How does a river generally flow?

Answer:

1. A river often begins its journey high in the mountains.
2. It flows downward across the land according to the land formations in its path.

12. How does the shape of land affect the movement of water?

Answer:

1. Water may flow, stop, or curve according to the shape of the land formations.
2. Flowing water can also change the shape of the land.

13. What does the chapter explain about the direction of Indian rivers?

Answer:

1. Rivers in India flow in different directions depending on the land.
2. Some flow towards the **Bay of Bengal**, while others flow towards the **Arabian Sea**.

14. Write two features of a pond heron.

Answer:

1. A pond heron is a bird with long legs.
2. It stands still near water to catch fish.

15. Write two features of a water scorpion.

Answer:

1. A water scorpion is an insect with pincers that lives underwater.
2. It breathes underwater using a tail tube.

16. Write two features of lotus and water lily.

Answer:

1. The flowers of lotus and water lily float on the surface of water.
2. Their roots remain fixed in the pond bed.

17. What are reeds and water hyacinth?

Answer:

1. Reeds are tall, grass-like plants that grow along the edges of ponds.
2. Water hyacinth is a fast-growing, free-floating plant that spreads on water.

18. How does the waxy coating on leaves help aquatic plants?

Answer:

1. The waxy coating makes the leaves waterproof.
2. It prevents too much water from entering the plant and protects it from damage.

19. What special features help plants and animals survive in freshwater habitats?

Answer:

1. Aquatic plants may have features such as floating leaves or long roots.
2. Aquatic animals may have features such as fins that help them move and survive in water.

20. Why are freshwater habitats important?

Answer:

1. Freshwater habitats support a rich variety of plants and animals.
2. These living beings depend on freshwater for their survival and growth.

1.8. Two-mark questions with Answers of HOTS Type: (20 Questions)

1. Why should freshwater be used carefully even though most of the Earth is covered with water?

Answer:

1. Most of the water on Earth is salty, and only a small amount is available as freshwater.
2. Since living beings depend on freshwater for survival, it must be used wisely.

2. What would happen if the Sun did not provide enough heat for the water cycle?

Answer:

1. Less water from rivers and oceans would change into water vapour.
2. This would disturb the continuous movement of water through the water cycle.

3. Why do water droplets appear inside a closed transparent bag kept in sunlight with water?

Answer:

1. The Sun's heat changes some of the water into water vapour.
2. The vapour cools and changes back into small water droplets.

4. What would happen to groundwater recharge if most open spaces were covered with concrete?

Answer:

1. Rainwater would not be able to seep easily into the ground.
2. Therefore, the recharge of groundwater would decrease.

5. Why are open grounds better than paved areas for groundwater recharge?

Answer:

1. Open grounds allow rainwater to seep through the soil.
2. The water can then move through soil and rocks and replenish groundwater.

6. How can a school campus help increase groundwater recharge?

Answer:

1. The school can maintain open spaces and construct soak pits or ponds.
2. It can also plant more trees so that more rainwater can return underground.

7. Why do rivers not always flow in a straight line?

Answer:

1. Water flows, stops, or curves according to the shape of the land formations in its path.
2. Therefore, changes in the land cause rivers to follow different paths.

8. How can the flow of a river affect the land over time?

Answer:

1. Flowing water follows the shape and formations of the land.
2. At the same time, the continuous flow of water can also change the shape of the land.

9. Why do some Indian rivers flow towards the Bay of Bengal while others flow towards the Arabian Sea?

Answer:

1. Rivers flow from higher areas towards lower areas by following the shape of the land.
2. Different landforms therefore guide rivers towards different seas.

10. What may happen to plants and animals if a freshwater pond dries up?

Answer:

1. The plants and animals living in and around the pond would lose their freshwater habitat.
2. Their survival and growth would become difficult because they depend on freshwater.

11. Why are fins an important adaptation for animals such as fish?

Answer:

1. Fins help fish move efficiently through water.
2. This feature enables them to live successfully in their aquatic habitat.

12. How are lotus and water hyacinth differently adapted to living in water?

Answer:

1. Lotus has floating flowers while its roots remain fixed in the pond bed.
2. Water hyacinth is free-floating and spreads on the surface of water.

13. Why is the waxy coating on the leaves of aquatic plants useful?

Answer:

1. The waxy coating makes the leaves waterproof and prevents too much water from entering them.
2. This protects the plant from damage and helps it remain healthy.

14. What might happen to a pond food chain if all the fish disappeared?

Answer:

1. Animals that eat fish would lose an important source of food.
2. This would disturb the feeding relationships among organisms in the freshwater habitat.

15. Why can the disappearance of one organism affect many other organisms in a freshwater habitat?

Answer:

1. Different organisms are connected because some organisms eat others for food.

2. Removing one organism can therefore affect the food available to other living beings.

16. Why might rainwater behave differently in a forest and in a heavily cemented city?

Answer:

1. In areas with open soil, rainwater can seep into the ground more easily.
2. In cemented areas, water cannot enter the ground easily, reducing groundwater recharge.

17. If there were no rainfall for a long period, how could freshwater availability be affected?

Answer:

1. Less rainwater would be available to replenish rivers, lakes, ponds, and groundwater.
2. As a result, freshwater available to living beings could decrease.

18. Why should students avoid touching or disturbing organisms while visiting a water body?

Answer:

1. Plants and animals are part of the natural freshwater habitat being observed.
2. Avoiding disturbance allows students to observe them safely in their natural surroundings.

19. How would planting more trees help an area facing declining groundwater levels?

Answer:

1. Trees are one of the measures mentioned in the chapter for helping rainwater return underground.
2. Therefore, planting more trees can support groundwater recharge.

20. Why is protecting freshwater habitats important for maintaining a variety of living organisms?

Answer:

1. Freshwater habitats support many different plants and animals with special features for living in water.
2. Protecting these habitats helps provide the water and living environment necessary for their survival.

1.9. Three-mark questions with Answers of LOTS Type: (16 Questions)

1. Explain the importance of freshwater for living beings.

Answer:

1. All living beings, including people, animals, birds, and plants, depend on freshwater for survival.
2. Freshwater is essential for drinking and growing crops.
3. Many plants and animals also live in freshwater habitats.

2. Explain the three different forms of water with examples.

Answer:

1. Water exists in **liquid form**, as in rain.
2. It exists in **solid form**, as in ice or snow.
3. It also exists as **vapour**, as in steam.

3. Describe how water changes from one form to another.

Answer:

1. Ice melts and changes from solid ice into liquid water.
2. When water is heated, it changes into steam or water vapour.
3. Water can therefore change between ice, liquid water, and steam.

4. Explain the water cycle.

Answer:

1. The Sun's heat changes water from oceans, rivers, and other sources into water vapour.
2. Water vapour forms clouds and comes down as rain, snow, or hail.
3. The water returns to rivers, lakes, and oceans, and this continuous circular movement is called the **water cycle**.

5. What is groundwater? How do we obtain it?

Answer:

1. Some rainwater seeps through the layers of soil and rocks.
2. Water stored deep underground is called **groundwater**.
3. We obtain groundwater using wells, borewells, tube wells, and handpumps.

6. Explain three ways to help groundwater recharge.

Answer:

1. Open and uncovered areas allow rainwater to seep into the ground.
2. Soak pits, ponds, and human-made lakes help rainwater return underground.
3. Planting more trees also helps in groundwater recharge.

7. What is surface water? Explain with examples.

Answer:

1. Water available naturally on the surface of the Earth is called **surface water**.
2. Rivers, ponds, and lakes are natural sources of freshwater.
3. These sources provide freshwater in addition to groundwater.

8. Explain how the shape of the land affects the flow of water.

Answer:

1. Water flows according to the shape of the land formations in its path.
2. Depending on the land, flowing water may stop, curve, or move in different directions.
3. The flow of water can also change the shape of the land.

9. Describe the flow of rivers shown in the chapter.

Answer:

1. A river often begins its journey from the mountains and flows down across the land.
2. Rivers flow in different directions according to the landforms they encounter.
3. Some Indian rivers flow towards the **Bay of Bengal**, while others flow towards the **Arabian Sea**.

10. Describe three animals found in or around freshwater habitats.

Answer:

1. The **water scorpion** lives underwater and breathes using a tail tube.
2. The **pond heron** has long legs and stands still to catch fish.
3. The **freshwater turtle** lives in ponds and rivers.

11. Describe three plants found in and around ponds.

Answer:

1. **Reeds** are tall, grass-like plants that grow along the edges of ponds.
2. **Lotus and water lilies** have floating flowers while their roots remain in the pond bed.
3. **Water hyacinth** is a fast-growing, free-floating plant that spreads on water.

12. Write three features of animals found in freshwater habitats.

Answer:

1. Fish have **fins** that help them swim through water.
2. Water scorpions have **pincers** and breathe underwater using a tail tube.
3. Pond herons have **long legs** that help them stand while catching fish.

13. Explain how aquatic plants are suited to living in water.

Answer:

1. Some aquatic plants have floating leaves or flowers.
2. Some have long roots that remain fixed in the pond bed.
3. Such special features help aquatic plants survive and grow in water.

14. Explain the importance of the waxy coating on the leaves of aquatic plants.**Answer:**

1. The waxy coating makes the leaves waterproof.
2. It prevents too much water from getting inside the plant.
3. This helps the plant remain healthy and protects it from damage.

15. What does the river food-chain activity teach us?**Answer:**

1. Different animals in a freshwater habitat depend on other organisms for food.
2. Organisms such as small fish, big fish, frogs, birds, crocodiles, and otters can be connected through feeding relationships.
3. The disappearance of one animal can affect other organisms that depend on it for food.

16. Describe the importance of freshwater habitats.**Answer:**

1. Freshwater habitats contain a rich variety of plants and animals.
2. These organisms have special features such as floating leaves, fins, and long roots.
3. Freshwater is essential for supporting their survival and growth.

1.10. Three-mark questions with Answers of HOTS Type: (16 Questions)**1. Earth has plenty of water, yet why should we conserve freshwater?****Answer:**

1. Most of the water on Earth is salty, while only a small amount is freshwater.
2. Humans, animals, birds, and plants depend on freshwater for survival and daily needs.
3. Therefore, the limited freshwater available must be conserved and used wisely.

2. What might happen to the water cycle if the Sun did not provide enough heat?**Answer:**

1. Less water from oceans, rivers, and other sources would change into water vapour.
2. This would reduce the formation of water vapour that later forms clouds.
3. Therefore, the continuous movement of water through the water cycle would be disturbed.

3. A transparent bag containing water is sealed and kept in sunlight. Explain the changes you would observe.**Answer:**

1. The Sun's heat would cause some liquid water to change into water vapour.
2. When the water vapour cools, small droplets would form inside the bag.
3. Eventually, the droplets would fall back down, demonstrating changes similar to the water cycle.

4. A playground is being completely covered with concrete. How could this affect groundwater?**Answer:**

1. The concrete surface would prevent much of the rainwater from entering the soil.
2. Less rainwater would seep through the soil and rocks to reach underground.
3. Therefore, groundwater recharge in the area would decrease.

5. Suggest three measures a school can take to improve groundwater recharge.**Answer:**

1. The school can keep some areas open and uncovered so that rainwater can seep into the soil.
2. It can construct soak pits, ponds, or human-made water-storage areas.
3. It can plant more trees to help rainwater return underground.

6. Why does rainwater behave differently in a forest and a heavily cemented city?

Answer:

1. In a forest or other open area, rainwater can seep easily into the soil.
2. In a heavily cemented city, paved surfaces prevent much of the rainwater from entering the ground.
3. Therefore, open areas are more helpful than cemented areas for groundwater recharge.

7. Why do rivers take different paths instead of always flowing in straight lines?

Answer:

1. Rivers flow according to the shape of the land formations in their path.
2. Depending on the land, flowing water may curve, stop, or move in different directions.
3. Hence, differences in landforms lead rivers to follow different paths.

8. How can the shape of land and flowing water affect each other?

Answer:

1. The shape of the land determines where and how water flows.
2. Water may flow, stop, or curve depending on the land formations it encounters.
3. At the same time, flowing water can gradually change the shape of the land.

9. Why do some Indian rivers flow towards the Bay of Bengal while others flow towards the Arabian Sea?

Answer:

1. Rivers generally flow from higher ground towards lower ground.
2. Mountains and other landforms guide rivers in different directions.
3. Therefore, the shape of the land directs some rivers towards the Bay of Bengal and others towards the Arabian Sea.

10. What might happen to a freshwater ecosystem if a pond completely dried up?

Answer:

1. Aquatic plants and animals would lose the freshwater habitat in which they live.
2. Organisms dependent on the pond for water, food, and survival would be affected.
3. The feeding relationships among organisms in and around the pond could also be disturbed.

11. If all the small fish disappeared from a pond, how could the food chain be affected?

Answer:

1. Animals that eat small fish would lose one of their sources of food.
2. This could affect other organisms connected to those animals through feeding relationships.
3. Thus, the disappearance of one organism can disturb the relationships within a freshwater food chain.

12. Compare how lotus and water hyacinth are adapted to aquatic life.

Answer:

1. Lotus has flowers that float on the water while its roots remain fixed in the pond bed.
2. Water hyacinth is free-floating and can spread over the surface of the water.
3. Both have features that enable them to grow successfully in freshwater habitats.

13. How does a waxy coating help an aquatic plant survive?

Answer:

1. The waxy coating makes the leaves waterproof.
2. It prevents too much water from getting inside the plant.
3. This protects the plant from damage and helps it remain healthy.

14. A child observes an animal with fins in a pond and a bird with long legs standing near the water. How do these features help them?

Answer:

1. Fins help an aquatic animal such as a fish move through water.
2. Long legs help a pond heron stand near or in the water while searching for fish.

3. These different features help the organisms function effectively in and around freshwater habitats.

15. What could happen if an area received no rainfall for two years?

Answer:

1. Less rainwater would be available to replenish ponds, lakes, rivers, and groundwater.
2. Freshwater available to people, plants, and animals could decrease.
3. Living organisms that depend on freshwater would therefore face difficulty in meeting their water needs.

16. Why is protecting freshwater habitats important for maintaining biodiversity?

Answer:

1. Freshwater habitats support a rich variety of plants and animals.
2. These organisms possess special features such as fins, floating leaves, and long roots that help them live in water.
3. Protecting freshwater habitats therefore helps these different organisms survive and grow.

1.11 Five-mark questions with Answers of LOTS Type: (10 Questions)

1. Explain the different forms of water and how water changes from one form to another.

Answer:

1. Water exists in three forms—**solid, liquid, and vapour**.
2. Ice and snow are examples of the solid form of water.
3. Rain is an example of liquid water, while steam represents water vapour.
4. Ice melts and changes into liquid water when it receives heat.
5. When water is heated, it changes into water vapour, showing that water can change from one form to another.

2. Describe the water cycle in five points.

Answer:

1. The **Sun's heat** causes water from oceans, rivers, and other sources to turn into water vapour.
2. The water vapour rises and later cools to form small water droplets.
3. Water vapour forms clouds in the atmosphere.
4. Water from the clouds comes down as **rain, snow, or hail** and returns to rivers, lakes, and oceans.
5. This constant circular movement of water in nature is called the **water cycle**.

3. Explain groundwater and groundwater recharge.

Answer:

1. When it rains, some rainwater is absorbed by the soil.
2. This water sinks through different layers of soil and rocks.
3. Water stored deep underground is called **groundwater**.
4. Wells, borewells, tube wells, and handpumps are used to draw groundwater for our use.
5. Open areas, soak pits, ponds, human-made lakes, and planting trees help rainwater return underground and recharge groundwater.

4. Explain surface water and the movement of rivers.

Answer:

1. Rivers, ponds, and lakes are natural sources of **surface freshwater**.
2. A river often begins its journey high in the mountains.
3. It flows downward across the land during its journey.
4. Water flows, stops, or curves according to the shape of the land formations in its path.
5. The flow of water can also change the shape of the land.

5. Describe five animals found in or around freshwater habitats and their features.**Answer:**

1. A **dragonfly** flies fast, lays eggs near water, and eats mosquitoes.
2. A **water scorpion** lives underwater and breathes using a tail tube.
3. A **pond heron** has long legs and stands still to catch fish.
4. A **freshwater turtle** is soft-shelled and lives in ponds and rivers.
5. A **water snake** is harmless and feeds on fish and frogs.

6. Describe the different types of plants found in and around freshwater habitats.**Answer:**

1. Different kinds of plants grow in and around ponds and other freshwater habitats.
2. **Reeds** are tall, grass-like plants that grow along the edges of ponds.
3. **Lotus and water lily** have flowers that float on water while their roots remain in the pond bed.
4. **Water hyacinth** is a free-floating plant that grows quickly and spreads over water.
5. Features such as floating leaves and long roots help aquatic plants survive and grow in water.

7. Explain why freshwater is important for life on Earth.**Answer:**

1. People, animals, birds, and plants depend on freshwater for survival.
2. Freshwater is necessary for drinking and other daily activities.
3. It is also required for growing crops.
4. Many plants and animals live in freshwater habitats such as rivers, lakes, and ponds.
5. Therefore, freshwater is essential for supporting life on Earth.

8. Explain the importance of groundwater recharge and the methods that support it.**Answer:**

1. Rainwater that seeps through soil and rocks helps replenish groundwater.
2. Open and uncovered areas allow water to enter the ground easily.
3. **Soak pits, ponds, and human-made lakes** help rainwater return underground.
4. Planting more trees also supports groundwater recharge.
5. Cemented surfaces reduce groundwater recharge because they prevent rainwater from entering the ground easily.

9. Describe how freshwater plants and animals are suited to their habitat.**Answer:**

1. Freshwater habitats support a rich variety of plants and animals.
2. Animals such as fish have **fins** that help them swim in water.
3. Plants such as lotus and water lily have floating parts while their roots remain in the pond bed.
4. Some aquatic leaves have a **waxy coating** that makes them waterproof and protects the plant.
5. These special features help freshwater organisms survive and grow in their aquatic habitat.

10. Explain the river food-chain activity described in the chapter.**Answer:**

1. Students choose different organisms such as small fish, big fish, frogs, birds, humans, crocodiles, or otters.
2. They think about what each organism eats and which organisms may eat it.
3. A string is used to connect organisms that depend on one another for food.
4. Students then discuss what might happen if one animal, such as fish, disappears.
5. The activity demonstrates the feeding relationships and dependence among organisms in a freshwater habitat.

1.12 Five-mark questions with Answers of HOTS Type: (5 Questions)

1. Earth has a large amount of water, yet freshwater must be conserved. Analyse why.

Answer:

1. Although most of the Earth's surface is covered with water, the majority of it is salty.
2. Only a small amount is available as freshwater for living beings.
3. People, animals, birds, and plants depend on freshwater for their survival.
4. Freshwater is also required for drinking, growing crops, and many daily activities.
5. Therefore, the limited freshwater available must be conserved and used wisely.

2. Imagine that most open areas in a city are replaced by concrete surfaces. Analyse its effect on groundwater.

Answer:

1. Concrete surfaces prevent rainwater from entering the soil easily.
2. As a result, less rainwater would seep through the layers of soil and rocks.
3. This would reduce the amount of water reaching underground storage.
4. Consequently, groundwater recharge would decrease in the city.
5. Maintaining open areas, soak pits, ponds, human-made lakes, and trees would help rainwater return underground.

3. What would happen if an area received no rain for two years? Explain using your understanding of the chapter.

Answer:

1. Water available in ponds, lakes, rivers, and other freshwater sources would decrease.
2. Less rainwater would be available to seep into the ground and recharge groundwater.
3. People could face difficulty in obtaining freshwater for drinking and daily activities.
4. Plants and animals that depend on freshwater would also face difficulty in surviving.
5. Thus, a long period without rainfall could seriously affect both freshwater availability and living organisms.

4. Explain how you would design a school campus that helps conserve water and recharge groundwater.

Answer:

1. I would keep some areas of the school campus open and uncovered so that rainwater can seep into the soil.
2. I would construct **soak pits** to help rainwater enter the ground.
3. I would include a pond or human-made water-storage area wherever possible.
4. I would plant more trees because they help rainwater return underground.
5. I would avoid unnecessarily covering the entire campus with cement because cemented surfaces reduce groundwater recharge.

5. A pond containing many plants and animals suddenly dries up. Predict how this could affect the ecosystem.

Answer:

1. Aquatic plants and animals would lose the freshwater habitat in which they live.
2. Fish, frogs, turtles, insects, and other organisms depending on the pond would be affected.
3. Animals that depend on fish or other pond organisms for food could face a shortage of food.
4. Feeding relationships among organisms in the freshwater habitat could therefore be disturbed.
5. This shows why freshwater habitats are essential for supporting a rich variety of life.

6. If all the fish disappeared from a river or pond, how might other living beings be affected?

Answer:

1. Animals that eat fish would lose an important source of food.
2. Birds and other fish-eating organisms might have to search for alternative food.
3. The feeding relationships connecting different organisms would be disturbed.
4. Changes affecting one organism can therefore influence other organisms that depend on it.
5. This demonstrates the interdependence of living beings in a freshwater food chain.

7. Compare how a forest and a heavily cemented city would handle the same amount of rainwater.

Answer:

1. Open soil in a forest allows more rainwater to seep into the ground.
2. Trees and uncovered areas help water return underground.
3. In a heavily cemented city, rainwater cannot easily enter the ground.
4. Therefore, groundwater recharge would be better in an area with more open soil than in a highly cemented area.
5. This comparison shows the importance of maintaining open spaces and planting trees for groundwater recharge.

8. Explain how the shape of land influences rivers and how rivers can also influence the land.

Answer:

1. Rivers generally begin from higher areas such as mountains and flow down across the land.
2. Water follows the shape of the land formations present in its path.
3. Depending on these formations, water may flow, stop, or curve in different directions.
4. This helps explain why different rivers may flow towards different seas.
5. At the same time, the flow of water can itself change the shape of the land.

9. Analyse how the special features of freshwater plants and animals help them survive in their habitat.

Answer:

1. Fish have fins that help them move through water.
2. Pond herons have long legs that help them stand near water while catching fish.
3. Lotus and water lily have floating flowers while their roots remain fixed in the pond bed.
4. Aquatic plants may have waxy leaves that prevent too much water from entering them.
5. These special features help different plants and animals survive and grow successfully in freshwater habitats.

10. Explain what might happen if one important stage of the water cycle were disturbed.

Answer:

1. The Sun's heat normally changes water from oceans and rivers into water vapour.
2. When the vapour cools, it forms droplets and contributes to cloud formation.
3. Water later returns to Earth as rain, snow, or hail.
4. This water returns to rivers, lakes, and oceans and continues the circular movement.
5. Therefore, disturbing one of these connected processes could affect the continuous movement of water through the water cycle.

1.13 Five-mark questions with Answers of Applied Type: (10 Questions)

1. Your school has a large cemented playground, and very little rainwater enters the soil. Suggest five practical measures to improve groundwater recharge.

Answer:

1. Some parts of the playground can be kept **open and uncovered** so that rainwater can seep into the soil.
2. **Soak pits** can be constructed to allow rainwater to move underground.
3. A small **pond or human-made water-storage area** can be developed on the campus.
4. More **trees can be planted** in suitable open spaces.
5. Unnecessary cementing of the remaining open areas should be avoided because it reduces the seepage of rainwater.

2. Your family notices that the water level in the neighbourhood wells is decreasing every year. Apply your knowledge of groundwater to explain the problem and suggest solutions.

Answer:

1. Groundwater is replenished when rainwater seeps through layers of soil and rocks.
2. Too many cemented surfaces may prevent sufficient rainwater from entering the ground.
3. Open spaces should therefore be maintained to allow rainwater to seep into the soil.
4. Soak pits and ponds can be created to improve groundwater recharge.
5. Planting trees can also help rainwater return underground and support groundwater recharge.

3. During a field visit, you observe lotus, water hyacinth, fish, and a pond heron. Explain how you would identify their adaptations to the freshwater habitat.

Answer:

1. I would observe the **lotus** and note that its flowers float while its roots remain fixed in the pond bed.
2. I would identify **water hyacinth** as a free-floating plant that spreads over the water surface.
3. I would observe that **fish have fins**, which help them move through water.
4. I would notice the **long legs of the pond heron**, which help it stand near or in water while catching fish.
5. These observations would show how different plants and animals have special features suited to freshwater habitats.

4. Suppose your village receives no rainfall for two years. Explain five possible effects on water and living organisms.

Answer:

1. Water available in **ponds, lakes, and rivers** could decrease because there would be little or no rainfall to replenish them.
2. Less rainwater would seep into the ground, reducing **groundwater recharge**.
3. People could face difficulty obtaining freshwater for drinking and other daily activities.
4. Plants and crops could suffer because freshwater is essential for their growth.
5. Animals and other organisms that depend on freshwater sources and habitats would also be affected.

5. A pond near your school is becoming smaller and some fish are disappearing. Explain how this may affect the pond food chain.

Answer:

1. The reduction of pond water can affect the freshwater habitat of plants and animals.
2. If fish disappear, animals that depend on them for food may have less food available.
3. Other organisms connected to these animals through feeding relationships may also be affected.

4. Thus, the disappearance of one organism can disturb several connections in the food chain.
5. Protecting freshwater habitats is therefore important for maintaining the variety of organisms living there.

6. You are asked to demonstrate the water cycle using a simple classroom activity. Explain how you would do it and what it shows.

Answer:

1. I would take some water in a transparent bag and seal the bag carefully.
2. I would keep it in sunlight and observe the changes occurring inside it.
3. The Sun's heat would cause some liquid water to change into **water vapour**.
4. On cooling, the vapour would form small **water droplets** inside the bag.
5. The activity would demonstrate how water continuously changes and moves in a process similar to the **water cycle**.

7. Your town plans to convert all open spaces into buildings and paved areas. As a student, explain why some open spaces should be preserved.

Answer:

1. Open areas allow **rainwater to seep into the ground**.
2. The water can move through soil and rocks and become part of groundwater.
3. Cemented and paved surfaces make it difficult for rainwater to enter the ground.
4. Preserving open spaces therefore supports **groundwater recharge**.
5. Trees, ponds, and soak pits in these spaces can further help rainwater return underground.

8. While visiting a pond, you notice that some leaves have a waxy surface. Design a simple observation to understand the usefulness of this feature.

Answer:

1. I would carefully observe a leaf from an aquatic plant without disturbing the habitat.
2. I would place or observe a few drops of water on its surface as suggested by the chapter's activity-based exploration.
3. I would notice that the water does not easily soak into the waxy leaf surface.
4. This shows that the **waxy coating makes the leaf waterproof** and prevents too much water from entering it.
5. I would conclude that this feature protects the plant and helps it live successfully in its watery habitat.

9. You are asked to design a “water-friendly home.” What five features or practices would you include based on the chapter?

Answer:

1. I would keep some ground around the house **open instead of completely cementing it**.
2. I would provide a **soak pit** so that rainwater can seep underground.
3. I would plant **trees and other plants** around the house.
4. If space permits, I would maintain a small pond or similar area that allows water to collect and seep into the ground.
5. These measures would help rainwater enter the soil and contribute to **groundwater recharge**.

10. During a nature walk, you find a pond with reeds, lotus, water hyacinth, fish, turtles, and birds. Explain what this tells you about freshwater habitats.

Answer:

1. The presence of many plants and animals shows that a freshwater pond supports a **rich variety of life**.

2. Reeds grow along the edges, while lotus and water lilies have parts adapted to living in water.
3. Water hyacinth is free-floating and spreads over the water surface.
4. Animals such as fish, turtles, and birds use the freshwater habitat for their survival.
5. The observations show that freshwater habitats are important ecosystems where different organisms live and depend on water.

**1.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:
(20 MCQs of LOTS & 20 MCQs of HOTS Type)**

1. Although most of the Earth is covered with water, why is freshwater considered limited?

- A. Most water is frozen permanently
- B. Most water is salty
- C. Freshwater cannot be stored
- D. Freshwater exists only underground

Answer: B. Most water is salty

2. If all the water on Earth were represented by a 200 mL glass, approximately how much freshwater is represented in the chapter's activity?

- A. 100 mL
- B. 50 mL
- C. 20 mL
- D. 5 mL

Answer: D. 5 mL

3. Which sequence correctly represents changes in the forms of water?

- A. Ice → heating → liquid water → further heating → water vapour
- B. Ice → cooling → water vapour → heating → liquid water
- C. Water vapour → heating → ice → cooling → water
- D. Liquid water → cooling → vapour → heating → ice

Answer: A. Ice → heating → liquid water → further heating → water vapour

4. A student observes droplets forming on a cool surface. Which change of state best explains this observation?

- A. Solid to liquid
- B. Liquid to vapour
- C. Vapour to liquid
- D. Liquid to solid

Answer: C. Vapour to liquid

5. Which factor provides the energy that drives the water cycle described in the chapter?

- A. Wind
- B. Moon
- C. Sun
- D. Soil

Answer: C. Sun

6. Which sequence best represents the water cycle?

- A. Rainfall → freezing → groundwater → Sun
- B. Evaporation → cloud formation → rain/snow/hail → collection
- C. Cloud formation → evaporation → freezing → melting
- D. Groundwater → ice → evaporation → soil

Answer: B. Evaporation → cloud formation → rain/snow/hail → collection

7. Which situation would MOST reduce groundwater recharge?

- A. Planting trees
- B. Creating soak pits
- C. Maintaining ponds
- D. Covering open land with cement

Answer: D. Covering open land with cement

8. Which combination would BEST help recharge groundwater in a school campus?

- A. Concrete roads and tiled grounds
- B. Open soil, trees and soak pits
- C. Buildings and covered drains
- D. Plastic sheets and cemented playgrounds

Answer: B. Open soil, trees and soak pits

9. Rainwater that passes through layers of soil and rocks and gets stored deep underground is called:

- A. Surface water
- B. Sea water
- C. Groundwater
- D. Water vapour

Answer: C. Groundwater

10. Which of the following is NOT mentioned as a means of obtaining groundwater?

- A. Well
- B. Borewell
- C. Handpump
- D. River

Answer: D. River

11. A town replaces most of its open soil with concrete. What is the most likely result?

- A. More rainwater will seep underground
- B. Groundwater recharge will decrease
- C. More freshwater will form in oceans
- D. Rivers will stop flowing completely

Answer: B. Groundwater recharge will decrease

12. Which group consists entirely of natural surface freshwater sources mentioned in the chapter?

- A. Rivers, ponds and lakes
- B. Oceans, seas and rivers
- C. Wells, borewells and ponds
- D. Handpumps, lakes and seas

Answer: A. Rivers, ponds and lakes

13. A river changes direction several times during its journey. What is the best explanation?

- A. Fish force the river to change direction
- B. The shape of the land influences its flow
- C. Water always moves towards mountains
- D. Clouds determine the exact river path

Answer: B. The shape of the land influences its flow

14. Which statement correctly describes the relationship between flowing water and land?

- A. Only land affects water; water cannot affect land
- B. Water always flows in straight lines

- C. Land affects water flow, and flowing water can also change land
- D. Rivers can flow only through flat land

Answer: C. Land affects water flow, and flowing water can also change land

15. Indian rivers shown in the chapter ultimately flow towards:

- A. Only the Arabian Sea
- B. Only the Bay of Bengal
- C. Either the Bay of Bengal or the Arabian Sea
- D. Only freshwater lakes

Answer: C. Either the Bay of Bengal or the Arabian Sea

16. An aquatic animal has pincers and uses a tube at the end of its tail for breathing. Identify it.

- A. Freshwater turtle
- B. Water scorpion
- C. Water snake
- D. Dragonfly

Answer: B. Water scorpion

17. Which feature helps a pond heron catch fish?

- A. Short wings
- B. Long legs
- C. Tail tube
- D. Fins

Answer: B. Long legs

18. Which pair is correctly matched?

- A. Water scorpion — long legs for catching fish
- B. Pond heron — breathes through a tail tube
- C. Water snake — eats fish and frogs
- D. Dragonfly — rooted in the pond bed

Answer: C. Water snake — eats fish and frogs

19. Which plant is free-floating and can spread rapidly over the surface of water?

- A. Reed
- B. Lotus
- C. Water lily
- D. Water hyacinth

Answer: D. Water hyacinth

20. Which statement correctly distinguishes lotus from water hyacinth?

- A. Lotus is free-floating while water hyacinth is rooted in the pond bed
- B. Lotus has roots in the pond bed while water hyacinth is free-floating
- C. Both grow only on dry land
- D. Both are completely submerged plants

Answer: B. Lotus has roots in the pond bed while water hyacinth is free-floating

21. Why is a waxy coating useful on the leaves of some aquatic plants?

- A. It makes the leaves heavier
- B. It helps the leaves absorb unlimited water
- C. It makes the leaves waterproof and prevents too much water from entering
- D. It changes the leaves into roots

Answer: C. It makes the leaves waterproof and prevents too much water from entering

22. Suppose fish suddenly disappear from a freshwater habitat. Which is the most reasonable consequence?

- A. Organisms that depend on fish for food may be affected
- B. All aquatic plants will immediately disappear

- C. Groundwater recharge will increase
- D. The water cycle will completely stop

Answer: A. Organisms that depend on fish for food may be affected

23. What is the main idea demonstrated by the river food-chain game?

- A. Every aquatic animal eats plants only
- B. Living organisms are connected through feeding relationships
- C. Rivers contain only fish and birds
- D. Aquatic organisms do not depend on one another

Answer: B. Living organisms are connected through feeding relationships

24. Which combination shows adaptations associated with freshwater organisms mentioned in the chapter?

- A. Fins, floating leaves and long roots
- B. Wings, thorns and dry scales only
- C. Thick fur, claws and desert roots
- D. Feathers, cactus stems and shells only

Answer: A. Fins, floating leaves and long roots

25. Two places receive equal rainfall. Place X has open soil and many trees, while Place Y is almost completely cemented. Which conclusion is most appropriate?

- A. Place Y will have better groundwater recharge
- B. Both places will always recharge groundwater equally
- C. Place X is likely to allow more water to seep underground
- D. Neither place can recharge groundwater

Answer: C. Place X is likely to allow more water to seep underground

26. If there were no rainfall for a very long period, which combination would most likely be affected?

- A. Only seawater
- B. Freshwater sources, groundwater and living organisms
- C. Only clouds
- D. Only mountain rocks

Answer: B. Freshwater sources, groundwater and living organisms

27. Which observation provides the best evidence that a pond is a freshwater habitat supporting diverse life?

- A. It contains only water
- B. It contains different aquatic plants and animals
- C. Its water never changes
- D. It has no organisms near its edges

Answer: B. It contains different aquatic plants and animals

28. Which action shows the best application of the chapter's ideas while designing a new school?

- A. Cement the entire campus
- B. Remove all trees
- C. Provide open spaces, trees and soak pits
- D. Cover the soil with plastic sheets

Answer: C. Provide open spaces, trees and soak pits

29. Consider the statements:

- I.** The Sun's heat helps water change into water vapour.
- II.** Water may return to the Earth's surface as rain, snow, or hail.
- III.** The water cycle is a continuous circular movement of water.

Which option is correct?

- A. Only I is correct
- B. I and II are correct
- C. II and III are correct
- D. I, II and III are correct

Answer: D. I, II and III are correct

30. Which sequence shows the most logical connection between rainfall and groundwater?

- A. Rainfall → cementing → evaporation → groundwater
- B. Rainfall → seepage through soil and rocks → groundwater storage
- C. Rainfall → ocean → handpump → groundwater
- D. Rainfall → clouds → borewell → soil

Answer: B. Rainfall → seepage through soil and rocks → groundwater storage

1.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

- (1) **Activity-Based Learning:** Conduct simple hands-on activities using ice, liquid water, heating, and condensation so students can directly observe the **three forms of water and changes between them**.
- (2) **Water Cycle Demonstration:** Use the transparent-bag activity from the chapter to help students observe evaporation and formation of water droplets, then connect their observations with the **water cycle**.
- (3) **Learning Through Local Observation:** Take students on a supervised nature walk to a nearby **pond, lake, stream, or other freshwater habitat** and ask them to record the plants and animals they observe without disturbing them.
- (4) **Groundwater Recharge Audit:** Ask students to identify **cemented and open areas** around the school and discuss where rainwater can seep into the ground more easily. Extend the activity by identifying suitable locations for trees, soak pits, or ponds.
- (5) **Map-Based River Learning:** Use a map of India and let students trace rivers and classify them according to whether they flow towards the **Bay of Bengal or Arabian Sea**. This strengthens observation and geographical understanding.
- (6) **Food-Chain Role Play:** Assign students the roles of different freshwater organisms and connect them according to **who eats whom**, following the river food-chain activity. Then remove one organism and discuss how the remaining organisms may be affected.
- (7) **Compare and Classify:** Give students pictures or names of organisms such as **fish, pond heron, water scorpion, lotus, reeds, and water hyacinth** and ask them to classify their special features and habitats.
- (8) **Observation of Aquatic Adaptations:** Encourage students to examine features such as **fins, long legs, floating leaves, long roots, and waxy leaf surfaces** and relate each feature to survival in freshwater habitats.
- (9) **Problem-Based Learning:** Present situations such as **“What if there is no rain for two years?”** or compare what happens to rainwater in a forest and a cemented city. Allow students to discuss the problem in groups and present possible consequences or solutions.
- (10) **Water-Conservation Design Challenge:** Ask groups to design a **water-friendly home or school** incorporating ideas from the chapter, such as open ground, trees, soak pits, and water-storage areas that support groundwater recharge.

1.16 Innovations Opportunity List from the Chapter: (10 Ideas)

- (1) **Mini Water-Cycle Laboratory:** Let students create a miniature water cycle using a transparent sealed bag containing a small quantity of water and place it in sunlight.

Students can observe and record the formation of water vapour and droplets through drawings or a simple observation diary.

- (2) **“Water Detective” Campus Challenge:** Form student teams to explore the school campus and identify **open soil, cemented areas, trees, ponds, and possible locations for soak pits**. They can prepare a simple “Groundwater-Friendly School Map” showing places where rainwater can seep underground.
- (3) **Build-a-Water-Friendly School Model:** Using cardboard, clay, waste materials, or building blocks, students can design a model school containing **open spaces, trees, soak pits, and water-storage areas**. Each group can explain how its design supports groundwater recharge.
- (4) **Interactive River Journey:** Create a large floor map of India and let students act as “water drops” travelling along different rivers towards the **Arabian Sea or Bay of Bengal**. This turns river direction and movement into an interactive learning experience.
- (5) **Freshwater Habitat Diorama:** Student groups can create 3D pond or river habitats showing **fish, turtles, water snakes, pond herons, reeds, lotus, water lilies, and water hyacinth**. They should label each organism and highlight features that help it live in or around water.
- (6) **Adaptation Mystery Cards:** Prepare clue cards such as “I have long legs and catch fish” or “I float freely and grow rapidly.” Students identify the organism and explain how the feature helps it in its freshwater habitat.
- (7) **Living Food-Web Game:** Give each child the role of a freshwater organism and connect students with strings according to **who eats whom**. Removing one organism from the web helps children visually understand how its disappearance can affect others.
- (8) **Aquatic Leaf Investigation:** Let students observe how drops of water behave on leaves with a waxy surface and record their observations through sketches. They can connect the observation with the chapter's explanation that a waxy coating makes leaves waterproof and prevents too much water from entering them.
- (9) **“What If?” Thinking Wall:** Display situations such as **“What if it did not rain for two years?”**, “What if a pond dried up?” or “What happens to rainwater in a cemented city?” Students can post short predictions and solutions on a classroom thinking wall. The chapter itself encourages reflection on prolonged lack of rain and differences between forest and city rainwater behaviour.
- (10) **Student Water-Conservation Campaign:** Students can create posters, slogans, badges, or short presentations based on the idea that freshwater is limited and essential for life. The activity can conclude with each child proposing one practical action for making the home or school more water-friendly.

1.17: Practicing Questions/Question Bank:

A. Fill in the Blanks – 1 Mark Each:

1. Most of the water on Earth is _____ water.
Answer: salty
2. Water exists in three forms—solid, liquid, and _____.
Answer: vapour
3. The solid form of water is called _____.
Answer: ice

4. The heat of the _____ causes water to change into water vapour.
Answer: Sun
5. The continuous circular movement of water in nature is called the _____.
Answer: water cycle
6. Water stored deep below the ground is called _____.
Answer: groundwater
7. _____ pits help rainwater seep into the ground.
Answer: soak
8. Rivers, ponds, and lakes are natural sources of _____ water.
Answer: surface / freshwater
9. The _____ coating on some aquatic leaves makes them waterproof.
Answer: waxy
10. The water scorpion breathes using a tube at the end of its _____.
Answer: tail
11. The pond heron has _____ legs that help it stand in water and catch fish.
Answer: long
12. The roots of lotus and water lily remain fixed in the _____ bed.
Answer: pond
13. Water hyacinth is a _____-floating plant.
Answer: free
14. Fish use their _____ to move through water.
Answer: fins
15. Some Indian rivers flow into the Arabian Sea while others flow into the _____.
Answer: Bay of Bengal

These concepts are directly covered in the chapter's treatment of forms of water, water cycle, groundwater, rivers, and freshwater habitats.

B. One-Mark Descriptive Questions:

1. **What is freshwater?**
Answer: Freshwater is water with very little salt that is essential for the survival of living beings.
2. **Name the three forms of water.**
Answer: The three forms of water are solid, liquid, and vapour.
3. **What is the water cycle?**
Answer: The constant circular movement of water in nature is called the water cycle.
4. **What is groundwater?**
Answer: Water that is stored deep underground after seeping through soil and rocks is called groundwater.

5. **Name any two methods of obtaining groundwater.**

Answer: Wells and borewells are two methods of obtaining groundwater.

6. **Name two natural sources of surface freshwater.**

Answer: Rivers and lakes are natural sources of surface freshwater.

7. **How does a pond heron catch fish?**

Answer: A pond heron uses its long legs to stand still in water while catching fish.

8. **What does a water snake eat?**

Answer: A water snake eats fish and frogs.

9. **Why do some aquatic leaves have a waxy coating?**

Answer: The waxy coating makes the leaves waterproof and prevents too much water from entering them.

10. **Name one free-floating aquatic plant.**

Answer: Water hyacinth is a free-floating aquatic plant.

C. Two-Mark Descriptive Questions:

Answers should contain two points/sentences.

1. **Why is freshwater important for living beings?**

Answer:

1. Humans, animals, birds, and plants depend on freshwater for survival.
2. It is required for drinking, growing crops, and other daily activities.

2. **How is groundwater formed?**

Answer:

1. Some rainwater soaks into the soil and moves through layers of soil and rocks.
2. This water gets stored deep underground as groundwater.

3. **How do soak pits and trees help groundwater?**

Answer:

1. Soak pits help rainwater seep into the ground.
2. Trees also support the process of groundwater recharge.

4. **How does the shape of land affect a river?**

Answer:

1. Water follows the shape of the land in its path.
2. Therefore, a river may flow, stop, or curve according to the land formations.

5. **Differentiate between lotus and water hyacinth.**

Answer:

1. Lotus has roots fixed in the pond bed while its flowers float on water.
2. Water hyacinth is a free-floating plant that spreads quickly over water.

6. What may happen if a pond dries up?**Answer:**

1. Aquatic plants and animals would lose their freshwater habitat.
2. Their survival and feeding relationships could be affected.

7. Why should large areas not be completely cemented?**Answer:**

1. Cemented surfaces prevent rainwater from easily entering the soil.
2. This reduces groundwater recharge.

8. Write two adaptations of freshwater organisms.**Answer:**

1. Fish have fins that help them move through water.
2. Some aquatic plants have floating leaves or long roots suited to their habitat.

D. Three-Mark Descriptive Questions:*Answers should contain three points/sentences.***1. Explain the water cycle.****Answer:**

1. The Sun's heat changes water from oceans, rivers, and other sources into water vapour.
2. The vapour forms clouds, and water returns as rain, snow, or hail.
3. This constant circular movement of water is called the water cycle.

2. Explain three ways of improving groundwater recharge.**Answer:**

1. Open areas should be maintained so that rainwater can enter the soil.
2. Soak pits, ponds, and human-made lakes can help water seep underground.
3. Planting trees also supports groundwater recharge.

3. Describe three freshwater animals and their features.**Answer:**

1. Water scorpions live underwater and breathe using a tail tube.
2. Pond herons have long legs and stand still to catch fish.
3. Water snakes are harmless and feed on fish and frogs.

4. Describe three plants found in and around freshwater habitats.**Answer:**

1. Reeds are tall grass-like plants growing along pond edges.
2. Lotus and water lilies have floating parts while their roots remain in the pond bed.

3. Water hyacinth is a free-floating and fast-growing plant.
5. **What would happen if there were no rainfall for a long time?**
Answer:
1. Water in freshwater sources could decrease.
 2. Groundwater recharge would also be reduced.
 3. People, plants, and animals depending on freshwater would be affected.
6. **Explain how rivers and landforms influence each other.**
Answer:

1. Rivers follow the shape of the land through which they flow.
2. Land formations can make flowing water stop, curve, or change direction.
3. Flowing water can also gradually change the shape of the land.

E. Five-Mark Descriptive Questions:

Answers should contain five points/sentences.

1. **Explain the water cycle in detail.**

Answer:

1. The Sun provides heat to water present in oceans, rivers, and other water bodies.
2. The heat changes some liquid water into water vapour.
3. As the vapour cools, small droplets form and contribute to cloud formation.
4. Water returns to Earth as rain, snow, or hail and reaches rivers, lakes, and oceans.
5. This continuous circular movement of water is called the water cycle.

2. **Explain groundwater formation and recharge.**

Answer:

1. Some rainwater soaks into the soil.
2. It moves downward through layers of soil and rocks.
3. Water stored deep underground is called groundwater.
4. Open areas, soak pits, ponds, and human-made lakes help water return underground.
5. Planting trees also helps in groundwater recharge.

3. **Explain five features of freshwater plants and animals that help them live in their habitat.**

Answer:

1. Fish have fins that help them move through water.
2. Pond herons have long legs that help them stand near or in water while catching fish.
3. Water scorpions breathe through a tube at the end of their tail.

4. Lotus and water lily have floating parts while their roots remain in the pond bed.
5. Some aquatic leaves have a waxy coating that makes them waterproof.
4. **Your school wants to become more water-friendly. Suggest five measures based on the chapter.**

Answer:

1. Keep some areas of the campus open and uncovered.
 2. Construct soak pits to allow rainwater to enter the ground.
 3. Maintain ponds or suitable human-made water-storage areas where possible.
 4. Plant more trees around the school campus.
 5. Avoid unnecessary cementing so that more rainwater can recharge groundwater.
5. **Explain what could happen to a freshwater habitat if an important organism such as fish disappeared.**

Answer:

1. Animals that eat fish would lose an important food source.
2. These animals might have difficulty finding sufficient food.
3. Other organisms connected to them through feeding relationships could also be affected.
4. The balance of feeding relationships in the freshwater habitat could be disturbed.
5. This shows that organisms in a freshwater habitat are interconnected and depend on one another.

5th Standard World Around Us Book Chapter 2

Chapter 2: Journey of a River

2.1 Summary of the Chapter:

Summary – Chapter 2: *Journey of a River*

- (1) **Journey of the Godavari:** The chapter follows the River Godavari, which begins at **Trimbakeshwar in the Western Ghats of Maharashtra**. Tributaries join it along the way, making it wider and stronger. It travels about **1,465 km** before joining the **Bay of Bengal**.
- (2) **Perennial and Seasonal Rivers:** The Godavari is a **perennial river**, meaning it flows throughout the year. Rivers that mainly flow when they receive water during the rainy season are called **seasonal rivers**.
- (3) **River Ecosystem:** Rivers provide freshwater habitats for many **plants, fish, birds and animals**. At the end of its journey, the Godavari forms a **delta**, and its freshwater meets the salty sea near the **Coringa Mangrove Forests**.
- (4) **Importance of Rivers:** Rivers provide water for **drinking, cooking, washing, farming and industries**. They also support people's livelihoods, and river water is distributed through **pipes and canals**.
- (5) **Dams and Reservoirs:** A **dam** is a large barrier that blocks the flow of a river and stores water in a **reservoir**. Stored water is useful for drinking, irrigation and generating electricity, but dams can also flood land and force people and animals to move.
- (6) **River Pollution:** **Plastic, waste, dirty water, chemicals and other pollutants** entering rivers can make the water unsafe and harm people, fish, turtles, birds and other living organisms. Using **eco-friendly products** and reducing waste can help protect rivers.
- (7) **Effects of Fertilisers:** Fertilisers washed from fields into rivers can cause excessive growth of plants and other organisms, forming a **"green blanket"** over the water. This can make it difficult for fish to breathe and make the water unsafe for drinking.
- (8) **Floods and Their Effects:** Heavy rainfall can cause rivers to **overflow their banks**, flooding houses, fields and roads. Floods can damage property, destroy crops, spread diseases and force people and animals to move to safer places.
- (9) **Importance of Trees and Flood Safety:** Trees help slow rainwater and allow the soil to absorb more water, while lack of trees can increase runoff and flooding. The chapter also teaches important **flood-safety measures**, such as preparing an emergency kit, following evacuation orders and moving to higher ground.
- (10) **Water Conservation:** Rivers can also **run dry**, causing serious difficulties for people and animals. Everyone can help conserve water by turning off taps, fixing leaks, reusing suitable water, planting trees and preventing waste from entering water bodies. **Every drop counts**.

2.2 Important Formulas:

Important Formulas – Chapter 2: *Journey of a River*:

The chapter is mainly **conceptual and environmental** and does **not introduce any specific mathematical formulas**. It discusses the Godavari's journey, dams and reservoirs, pollution, floods, drought and water conservation. For example, it gives the Godavari's length as **1,465 km**, but does not present numerical formula-based exercises.

However, for **simple quantitative/application problems related to the chapter**, the following basic formulas can be useful:

(1) Distance travelled

$$\text{Distance} = \text{Speed} \times \text{Time}$$

Related forms: $\text{Speed} = \text{Distance} \div \text{Time}$ and $\text{Time} = \text{Distance} \div \text{Speed}$

(2) Total water used

$$\text{Total Water Used} = \text{Water Used per Person} \times \text{Number of People}$$

(3) Water saved

$$\text{Water Saved} = \text{Water Used Before} - \text{Water Used After}$$

This can be applied to the chapter's emphasis on avoiding wastage and conserving water.

(4) Percentage of water saved

$$\text{Percentage Saved} = (\text{Water Saved} \div \text{Original Water Used}) \times 100$$

(5) Daily water consumption

$$\text{Daily Consumption} = \text{Total Water Consumed} \div \text{Number of Days}$$

(6) Average water use per person

$$\text{Average Water Use} = \text{Total Water Used} \div \text{Number of People}$$

(7) Capacity / Volume of a rectangular water tank

$$\text{Volume} = \text{Length} \times \text{Breadth} \times \text{Height}$$

Useful for simple problems connected with storing water in reservoirs or tanks. The chapter explains that dams store water in large water bodies called **reservoirs**.

(8) Conversion of water volume

$$1 \text{ litre} = 1,000 \text{ millilitres}$$

$$1 \text{ kilolitre} = 1,000 \text{ litres}$$

$$1 \text{ cubic metre} = 1,000 \text{ litres}$$

(9) Rainfall collected from a surface

$$\text{Water Collected} = \text{Rainfall Depth} \times \text{Collection Area}$$

This could be used for enrichment problems connected with rainfall, runoff and flooding. The chapter explains that heavy rainfall can cause rivers to overflow and flood surrounding areas.

(10) Percentage increase or decrease

$$\text{Percentage Change} = (\text{Change} \div \text{Original Value}) \times 100$$

This can be used for simple questions involving changes in river level, rainfall, water use or water availability.

For this chapter:

For **5th-standard students**, the most relevant quantitative skills are **addition, subtraction, multiplication, division, unit conversion and simple percentages** rather than advanced formulas. The chapter itself should primarily be assessed through **conceptual, reasoning and application-based questions** about rivers, dams, pollution, floods and water conservation.

2.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)**LOTS Fill-in-the-Blanks with Answers:**

- The journey of the River Godavari begins at _____ in Maharashtra.
Answer: Trimbakeshwar
- Trimbakeshwar is located in the _____ Ghats.
Answer: Western
- Small streams that join a larger river are called _____.
Answer: tributaries
- The Godavari travels about _____ kilometres before joining the sea.
Answer: 1,465
- The Godavari finally joins the _____.
Answer: Bay of Bengal

6. The Godavari is the _____ **longest river in India** after the Ganga.
Answer: second
7. The Godavari is also known as _____ **Ganga**.
Answer: Dakshina
8. A river that flows throughout the year is called a _____ **river**.
Answer: perennial
9. Rivers that mainly flow when they receive water during the rainy season are called _____ **rivers**.
Answer: seasonal
10. When a river reaches the sea and spreads into many small streams, it forms a _____.
Answer: delta
11. The Godavari's journey ends at the _____ **Mangrove Forests**.
Answer: Coringa
12. A giant wall built across a river to block its flow is called a _____.
Answer: dam
13. The large water body in which water is stored behind a dam is called a _____.
Answer: reservoir
14. Dams store water that can be used to drink, grow crops and make _____.
Answer: electricity
15. Waste, plastic and dirty water can _____ a river.
Answer: pollute
16. Using _____ **-friendly** products is one way of creating less waste.
Answer: eco
17. Fertilisers entering river water can cause plants and other organisms to grow very _____.
Answer: fast
18. Excessive plant growth can cover the river surface like a “_____ **blanket**.”
Answer: green
19. When a river overflows its banks due to too much rain, it causes a _____.
Answer: flood
20. While brushing our teeth, we should turn off the _____ to save water.
Answer: tap

2.4 Fill-Up the Blank HOTS type questions with Answers: (20 Questions)

HOTS Fill-in-the-Blanks with Answers:

1. If a river receives water throughout the year and never completely dries up, it can be classified as a _____ **river**.
Answer: perennial
2. If several small streams join a river during its journey, those smaller streams are called _____.
Answer: tributaries
3. A river flows only during the rainy season and becomes dry when rainfall stops. It is most likely a _____ **river**.
Answer: seasonal
4. If a river divides into several smaller streams before entering the sea, the landform created at its mouth is called a _____.
Answer: delta

5. If freshwater from a river meets salty seawater near a mangrove forest, the area can provide an important _____ for many plants and animals.
Answer: habitat
6. Farmers living near a river can use its water to grow crops through a process called _____.
Answer: irrigation
7. If a village needs to store river water for use during the dry season, building a dam can create a _____.
Answer: reservoir
8. A family receives 100 litres of water but uses only 80 litres. By avoiding unnecessary use of the remaining 20 litres, the family is practising water _____.
Answer: conservation
9. If plastic bags, waste and dirty water are continuously dumped into a river, the river will become _____.
Answer: polluted
10. Choosing reusable and eco-friendly products instead of disposable items can help _____ the amount of waste reaching rivers.
Answer: reduce
11. Water may look clear but still contain harmful dissolved chemicals; therefore, clear-looking water is not always _____ for drinking.
Answer: safe
12. If fertilisers from farms are washed into a river, excessive growth of plants and organisms may form a “_____ **blanket**” on its surface.
Answer: green
13. When a “green blanket” covers the water surface, fish may find it difficult to _____.
Answer: breathe
14. If heavy rainfall causes a river to become deeper, faster and bigger until it overflows its banks, the surrounding area may experience a _____.
Answer: flood
15. If many trees are cut down near a river, rainwater runs off the land faster and increases the risk of _____.
Answer: flooding
16. Planting more trees can reduce surface runoff because their presence helps the soil _____ rainwater.
Answer: soak up
17. During a flood, if water is rapidly entering a low-lying area, people should move to _____ **ground** for safety.
Answer: higher
18. If a region has no water available for a very long period, families may be forced to _____ to places where water is available.
Answer: move
19. Instead of throwing away clean water left after washing fruits and vegetables, using it for plants is an example of water _____.
Answer: reuse
20. A leaking tap wastes water continuously; therefore, getting it _____ with the help of an adult is an effective way to conserve water.
Answer: fixed

2.5 One-mark questions with Answers of LOTS Type: (20 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type

1. **Where does the River Godavari begin its journey?**
Answer: The River Godavari begins its journey at Trimbakeshwar in the Western Ghats of Maharashtra.
2. **What are tributaries?**
Answer: Tributaries are small streams or rivers that join a larger river.
3. **How long is the River Godavari?**
Answer: The River Godavari travels about 1,465 kilometres before joining the Bay of Bengal.
4. **Where does the River Godavari finally join the sea?**
Answer: The River Godavari finally joins the Bay of Bengal.
5. **Why is the Godavari called Dakshina Ganga?**
Answer: The Godavari is called Dakshina Ganga because it flows through southern India and is regarded as sacred.
6. **What is a perennial river?**
Answer: A perennial river is a river that flows throughout the year.
7. **What is a seasonal river?**
Answer: A seasonal river is a river that mainly flows when it receives water during the rainy season.
8. **What is a delta?**
Answer: A delta is formed when a river spreads into many small streams as it reaches the sea.
9. **Where does the journey of the Godavari end?**
Answer: The journey of the Godavari ends at the Coringa Mangrove Forests.
10. **Mention one way in which rivers help people.**
Answer: Rivers provide water to people for activities such as drinking, cooking and washing.
11. **How is river water carried to different places?**
Answer: River water is carried to different places through pipes and canals.
12. **What is ecotourism?**
Answer: Ecotourism means visiting natural places to enjoy and learn about nature without harming the environment.
13. **What is a dam?**
Answer: A dam is a giant wall that blocks the flow of a river and stores its water.
14. **What is a reservoir?**
Answer: A reservoir is a large water body in which water is stored behind a dam.
15. **Name any two things that pollute rivers.**
Answer: Plastic waste and dirty water are two things that pollute rivers.
16. **Why should we use eco-friendly products?**
Answer: We should use eco-friendly products because they help us create less waste.
17. **What happens when fertilisers enter river water?**
Answer: Fertilisers can cause plants and other organisms to grow very fast and cover the river surface like a green blanket.
18. **When does a river cause flooding?**
Answer: A river causes flooding when too much rain makes it overflow its banks.
19. **How do trees help reduce flooding?**
Answer: Trees slow down rainwater and help the soil soak up water.
20. **Mention one way to save water at home.**
Answer: We can save water at home by turning off the tap while brushing our teeth.

2.6 One-mark questions with Answers of HOTS Type: (20 Questions)**One-Mark Descriptive Questions with Answers – HOTS Type:**

1. **Why does the Godavari become wider and stronger as it moves across the land?**
Answer: The Godavari becomes wider and stronger because rainwater and tributaries join it during its journey.
2. **A river flows throughout the year; how would you classify it?**
Answer: It would be classified as a perennial river because it flows throughout the year.
3. **Why are rivers important habitats for living organisms?**
Answer: Rivers are important habitats because their freshwater supports many plants and animals.
4. **What landform would you expect where a river spreads into many small streams before reaching the sea?**
Answer: We would expect a delta to form where the river spreads into many small streams before reaching the sea.
5. **Why did people traditionally build their homes near rivers?**
Answer: People built their homes near rivers because rivers provided water for their daily needs and livelihoods.
6. **How would farmers be affected if a nearby river dried up?**
Answer: Farmers could find it difficult to grow crops because sufficient water for irrigation might not be available.
7. **Why can a dam be useful during a dry season?**
Answer: A dam can be useful during a dry season because its reservoir stores water for drinking, farming and other needs.
8. **Why might some families have to move when a large dam is built?**
Answer: Some families may have to move because the stored water behind the dam can flood the land where they live.
9. **Why is throwing plastic waste into a river harmful?**
Answer: Throwing plastic waste into a river pollutes the water and harms the living organisms that depend on it.
10. **Can water that looks clean still be harmful? Give a reason.**
Answer: Yes, water that looks clean can still contain harmful chemicals or dirty substances that may hurt living beings.
11. **Why are eco-friendly products better for protecting rivers?**
Answer: Eco-friendly products are better because using them can help create less waste that may reach rivers.
12. **What could happen if too much fertiliser from farms enters a river?**
Answer: Too much fertiliser can cause excessive growth of plants and organisms that cover the river surface like a green blanket.
13. **Why may fish find it difficult to survive under a “green blanket” in a river?**
Answer: Fish may find it difficult to survive because excessive plant growth makes it hard for them to breathe.
14. **Why does continuous heavy rainfall increase the chance of a flood?**
Answer: Continuous heavy rainfall adds too much water to a river, causing it to expand and overflow its banks.
15. **How can cutting down trees increase the risk of flooding?**
Answer: Cutting down trees increases flooding because rainwater runs off the land faster instead of soaking into the soil.

16. Why should a person avoid walking or driving through floodwater?

Answer: A person should avoid walking or driving through floodwater because the chapter identifies avoiding floodwater as an important safety measure.

17. What should you do if authorities order evacuation during a flood?

Answer: I should follow the evacuation order and move to a safer or higher place.

18. Why can a river running dry force families to leave their homes?

Answer: Families may have to leave because they need to move to places where water is still available.

19. How can water left after washing fruits and vegetables be used wisely?

Answer: Clean water left after washing fruits and vegetables can be reused for watering plants.

20. Why can small water-saving actions make a big difference?

Answer: Small actions such as turning off taps, fixing leaks and reusing water collectively help conserve valuable water resources.

2.7 Two-mark questions with Answers of LOTS Type: (15 Questions)**Two-Mark Descriptive Questions with Answers – LOTS Type:****1. Where does the Godavari begin and where does it end?**

Answer:

1. The Godavari begins at **Trimbakeshwar in the Western Ghats of Maharashtra.**
2. It travels 1,465 kilometres before joining the **Bay of Bengal.**

2. What are tributaries? How do they affect a river?

Answer:

1. Tributaries are small streams that join a larger river.
2. They add water to the river, making it wider and stronger.

3. Differentiate between perennial and seasonal rivers.

Answer:

1. A **perennial river** flows throughout the year.
2. A **seasonal river** mainly flows when it receives water during the rainy season.

4. What happens when the Godavari reaches the sea?

Answer:

1. The Godavari spreads into many small streams and forms a **delta.**
2. Its freshwater meets the salty sea near the **Coringa Mangrove Forests.**

5. Mention any two ways in which rivers support people.

Answer:

1. Rivers provide water for **drinking, cooking and washing.**
2. They also provide water for **growing food and making things in factories.**

6. What is ecotourism? Mention its purpose.

Answer:

1. Ecotourism means visiting natural places such as forests, rivers and mountains to enjoy their beauty and observe nature.
2. Its purpose is to learn about nature **without harming the environment.**

7. What is a dam and what is a reservoir?

Answer:

1. A **dam** is a giant wall that blocks the flow of a river.
2. A **reservoir** is the large water body in which water is stored behind a dam.

8. Mention any two uses of water stored in dams.

Answer:

1. Stored water is used for **drinking and growing crops** during dry seasons.

2. It is also used to **make electricity**.

9. Mention two problems caused by the construction of dams.

Answer:

1. Dams can cause land that was once home to people and animals to be **flooded**.
2. Many people may have to **leave their homes and shift elsewhere**.

10. Name any two causes of river pollution mentioned in the chapter.

Answer:

1. **Plastic and other waste** thrown into rivers cause pollution.
2. **Dirty water** entering rivers also pollutes them.

11. What does the sugar-and-oil activity teach us about water?

Answer:

1. The activity shows that **some substances dissolve in water**.
2. It also shows that **some substances do not dissolve in water**.

12. What happens when fertilisers are washed into a river?

Answer:

1. Fertilisers make plants and other organisms in the water **grow very fast**.
2. They may cover the surface like a **“green blanket,”** making it difficult for fish to breathe.

13. What happens when a river floods?

Answer:

1. The river overflows its banks and floods **houses, fields and roads**.
2. People and animals may have to **leave their homes and move to safety**.

14. How do trees help in reducing floods?

Answer:

1. Trees **slow down rainwater** flowing over the land.
2. They help the **soil soak up water**, thereby reducing rapid runoff.

15. Mention two ways in which children can save water.

Answer:

1. Children can **turn off the tap while brushing their teeth** and avoid wasting drinking water.
2. They can **reuse clean water left after washing fruits and vegetables for watering plants**.

2.8. Two-mark questions with Answers of HOTS Type: (15 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. Why does the Godavari become wider and stronger as it moves away from its source?

Answer:

1. Rainwater and many smaller streams called **tributaries** join the Godavari during its journey.
2. The additional water from these sources makes the river wider and stronger.

2. A river flows only during the rainy season. How would you classify it and why?

Answer:

1. The river would be classified as a **seasonal river**.
2. This is because seasonal rivers mainly flow when they receive water during the rainy season.

3. Why would the lives of people living near a river be affected if the river dried up?

Answer:

1. People would face difficulty getting water for drinking, cooking, washing and growing food.

2. If water remained unavailable for a long time, families might have to move to places where water is available.

4. A village frequently faces water shortage during summer. How could a dam help the villagers?

Answer:

1. A dam could store river water in a **reservoir** for use during the dry season.
2. The stored water could be used for drinking, growing crops and making electricity.

5. Why can the construction of a dam be both helpful and harmful?

Answer:

1. A dam is helpful because it stores water for drinking, agriculture and electricity generation.
2. It can be harmful because the reservoir may flood land and force people and animals to leave their homes.

6. A river looks clear, but chemicals have entered it. Is the water necessarily safe to drink? Why?

Answer:

1. No, clear-looking river water is not necessarily safe to drink.
2. Harmful chemicals and dirty substances may be present in the water even when they cannot be easily seen.

7. How can using eco-friendly products help protect river life?

Answer:

1. Using eco-friendly products helps create **less harmful waste** that can enter rivers.
2. Cleaner river water provides a safer environment for fish, turtles, birds and other living organisms.

8. What might happen if farmers use too much fertiliser near a river?

Answer:

1. Fertilisers may be washed into the river and cause plants and other organisms to grow very rapidly.
2. This growth may form a **“green blanket”** that makes it difficult for fish to breathe and makes the water unsafe for people.

9. Why is throwing household waste into a river harmful to both humans and animals?

Answer:

1. Household waste can pollute river water and make it unsafe for people who use it.
2. It can also harm fish, turtles, birds and other organisms living in and around the river.

10. How can planting trees near a river help reduce the risk of floods?

Answer:

1. Trees slow down rainwater and help the soil **soak up more water**.
2. This reduces the amount of water running rapidly over the land into the river.

11. What could happen if many trees in a flood-prone area were cut down?

Answer:

1. Without trees, rainwater would run off the land more quickly instead of soaking into the soil.
2. Faster runoff could increase the possibility of **flooding**.

12. During a flood, why should people move to higher ground and avoid floodwater?

Answer:

1. Moving to higher ground helps people stay away from rising floodwater.
2. People should avoid walking, driving or swimming in floodwater as part of the flood-safety measures given in the chapter.

13. Why is an emergency kit useful during a flood?

Answer:

1. An emergency kit keeps important supplies ready when people have to leave their homes quickly.
2. The chapter recommends including necessities such as **food, medicines and a flashlight**.

14. A child leaves the tap running while brushing every day. What change should the child make and why?

Answer:

1. The child should **turn off the tap while brushing** to prevent unnecessary water loss.
2. Such small actions help conserve water because **every drop counts**.

15. How can water left after washing fruits and vegetables be used more wisely?

Answer:

1. Clean water left after washing fruits and vegetables can be **reused for watering plants**.
2. Reusing such water reduces wastage and helps conserve water for the future.

2.9. Three-mark questions with Answers of LOTS Type: (10 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. Describe the journey of the River Godavari from its source to the sea.

Answer:

1. The Godavari begins at **Trimbakeshwar in the Western Ghats of Maharashtra**.
2. Rainwater and tributaries join it as it travels across the land, making it wider and stronger.
3. It travels **1,465 kilometres** before joining the **Bay of Bengal**.

2. Explain perennial and seasonal rivers.

Answer:

1. A **perennial river** flows throughout the year.
2. The Godavari is an example of a perennial river.
3. **Seasonal rivers** mainly flow when they receive water during the rainy season.

3. Describe the formation of the Godavari delta.

Answer:

1. When the Godavari reaches the sea, it spreads out into many small streams.
2. These streams together form a **delta**.
3. Its freshwater meets the salty sea near the **Coringa Mangrove Forests**, where its journey ends.

4. Mention three ways in which the Godavari supports people's lives.

Answer:

1. It provides water for **drinking, cooking and washing**.
2. It provides water to fields and helps people **grow food**.
3. Its water is also used in **factories** and supports many livelihoods.

5. Explain the importance of dams.

Answer:

1. Dams block the flow of rivers and store water in large water bodies called **reservoirs**.
2. The stored water can be used during dry seasons for **drinking and growing crops**.
3. Stored river water can also be used to **make electricity**.

6. Mention three problems that may result from river pollution.

Answer:

1. Waste, plastic and dirty water can make river water **polluted and unclean**.
2. People using polluted river water may become **sick**.
3. Pollution can harm fish, turtles, birds and other organisms living in and around rivers.

7. Explain what happens when fertilisers enter river water.**Answer:**

1. Fertilisers used on farms may get washed into river water.
2. They make plants and other organisms grow rapidly until they cover the water surface like a **“green blanket.”**
3. This makes it difficult for fish to breathe and can make the water unsafe for people to drink.

8. Describe three effects of a river flood.**Answer:**

1. Floodwater can damage **houses, fields and roads.**
2. Floods can cause great damage and destruction in the surrounding areas.
3. People and animals may have to leave their homes and move to safer places.

9. Mention three safety measures to follow during a flood.**Answer:**

1. People should **avoid contact with floodwater** and should not swim in it.
2. They should move to **higher ground** and follow evacuation orders.
3. They should not touch **power lines** or walk or drive through floodwater.

10. Mention three ways in which we can conserve water in our daily lives.**Answer:**

1. We should **turn off the tap while brushing our teeth.**
2. We should fix leaking taps with the help of adults and avoid wasting drinking water.
3. Clean water left after washing fruits and vegetables can be **reused for watering plants.**

2.10. Three-mark questions with Answers of HOTS Type: (20 Questions)**Three-Mark Descriptive Questions with Answers – HOTS Type:**

1. A river that normally flows throughout the year suddenly receives very heavy rainfall. What changes may occur and what could be the result?

Answer:

1. Heavy rainfall can make the river **faster, deeper and bigger.**
2. The increased water may cause the river to **overflow its banks.**
3. This can flood houses, fields and roads and force people and animals to move to safer places.

2. A village plans to build a dam across a nearby river. Analyse one benefit and two possible problems.

Answer:

1. The dam can store water in a **reservoir** for drinking, farming and making electricity.
2. The stored water may flood land that was previously home to people and animals.
3. As a result, some people may have to **leave their homes and shift elsewhere.**

3. A river looks clean and clear, but water from nearby factories enters it. Can you conclude that the river is safe? Explain.

Answer:

1. No, the river cannot be considered safe merely because its water looks clean.
2. Harmful chemicals and dirty water can be present even when they are not clearly visible.
3. Such polluted water can harm living organisms and may be unsafe for people to use.

4. Farmers near a river use large amounts of fertilisers. Predict how this could affect the river ecosystem.

Answer:

1. Fertilisers can be washed from the fields into the river.
2. They can cause plants and other organisms to grow rapidly and form a **“green blanket”** over the water.
3. This can make it difficult for fish to breathe and make the water unsafe for people to drink.

5. What might happen if most of the trees around a flood-prone river are cut down?

Give reasons.

Answer:

1. Without trees, rainwater will run off the land more quickly.
2. Less rainwater will be able to **soak into the soil**.
3. Faster runoff can increase the possibility of **flooding** in the surrounding area.

6. Suppose your neighbourhood is located near a river that is becoming polluted.

Suggest three actions that can help protect it.

Answer:

1. People should prevent **waste and plastic** from being thrown into the river.
2. They should use **eco-friendly products** to reduce harmful waste.
3. Everyone should take responsibility for keeping nearby water bodies clean and free from pollution.

7. Your family has been asked to evacuate because a flood is expected. What three actions should you take?

Answer:

1. We should follow the **evacuation orders** and move to higher or safer ground.
2. We should take an emergency bag containing necessities such as food, medicines and a flashlight.
3. We should avoid walking or driving through floodwater and stay away from power lines.

8. A region has received very little water for a long period. Predict three effects on the people and animals living there.

Answer:

1. People may find it difficult to obtain enough water for **drinking, cooking, bathing and cleaning**.
2. Families may have to move to other places where water is still available.
3. Animals will also suffer because they depend on available water for survival.

9. Explain how small changes in a family's daily habits can contribute to water conservation.

Answer:

1. Family members can turn off taps while brushing and avoid wasting drinking water.
2. They can **fix leaking taps** and reuse clean water left after washing fruits and vegetables for plants.
3. When everyone follows such habits regularly, small actions together can help conserve water.

10. Imagine you are planning a new town near a river. Suggest three important measures to protect both the river and the people.

Answer:

1. Waste and dirty water should be prevented from entering the river to **keep it clean**.
2. Trees should be protected and planted because they help slow rainwater and reduce rapid runoff.
3. Water should be stored and used wisely so that sufficient water remains available even during dry periods.

2.11 Five-mark questions with Answers of LOTS Type: (5 Questions)**Five-Mark Descriptive Questions with Answers – LOTS Type:****1. Describe the journey of the River Godavari from its source to the sea.****Answer:**

1. The River Godavari begins its journey at **Trimbakeshwar in the Western Ghats of Maharashtra**.
2. It starts as a small stream and becomes wider and stronger as rainwater and other streams join it.
3. The smaller streams that join the river are called **tributaries**.
4. The Godavari travels about **1,465 kilometres** and is the second longest river in India after the Ganga.
5. It finally reaches the **Bay of Bengal**, forming a delta near the Coringa Mangrove Forests.

2. Explain five ways in which rivers support people and their livelihoods.**Answer:**

1. Rivers provide water for **drinking** to people living in towns and villages.
2. River water is used for everyday activities such as **cooking and washing**.
3. Farmers use river water to **grow crops and produce food**.
4. River water is also used in **factories for making different products**.
5. River water is carried through **pipes and canals**, supporting communities and many livelihoods.

3. Explain dams, reservoirs, and their advantages and disadvantages.**Answer:**

1. A **dam** is like a giant wall that blocks the natural flow of a river.
2. The water stored behind a dam forms a large water body called a **reservoir**.
3. Stored water can be used during dry seasons for **drinking and growing crops**.
4. The stored water can also be used to **make electricity**.
5. However, dams can flood land where people and animals lived, forcing many people to shift elsewhere.

4. Explain the causes and harmful effects of river pollution.**Answer:**

1. **Waste, plastic and dirty water** entering rivers cause water pollution.
2. Polluted river water may become dirty and may not smell or look clean.
3. People who use polluted water can become **sick**.
4. Pollution also harms fish, turtles, birds and other living organisms in and around rivers.
5. Using **eco-friendly products** and creating less waste can help keep rivers clean.

5. Describe floods, their effects and important safety measures.**Answer:**

1. Heavy rainfall can make a river **faster, deeper and bigger**, causing it to overflow its banks.
2. Floodwater can damage **houses, fields and roads**, causing great destruction.
3. People and animals may have to leave their homes and move to safer places.
4. During a flood, people should move to **higher ground**, avoid floodwater and follow evacuation orders.
5. People should also avoid power lines and should not return to disaster areas until they are declared safe.

2.12 Five-mark questions with Answers of HOTS Type: (5 Questions)**Five-Mark Descriptive Questions with Answers – HOTS Type:**

1. A village near a river faces severe flooding after continuous heavy rainfall. Analyse the causes and suggest measures to reduce the problem.

Answer:

1. Continuous heavy rainfall adds large amounts of water to the river, making it **faster, deeper and bigger**.
2. When the river cannot hold the extra water, it overflows its banks and floods houses, fields and roads.
3. Cutting down trees can worsen flooding because water runs off the land faster instead of soaking into the soil.
4. Planting and protecting trees can help slow rainwater and allow more water to soak into the ground.
5. People in flood-prone areas should remain informed, prepare emergency supplies and know safe evacuation routes.

2. A dam is proposed across a river near several villages. Evaluate its benefits and possible problems.

Answer:

1. A dam can store large quantities of river water in a **reservoir** for use during dry seasons.
2. The stored water can be used for **drinking, growing crops and making electricity**.
3. However, the reservoir may flood land that was previously home to people and animals.
4. Families living in the affected areas may have to leave their homes and shift elsewhere.
5. Therefore, the benefits of stored water should be considered along with the effects of the dam on nearby people, animals and land.

3. Farmers notice a thick “green blanket” forming on a nearby river after fertilisers are used on their fields. Explain what may have happened and its effects.

Answer:

1. Fertilisers used on farms may have been **washed into the river water**.
2. These fertilisers can make plants and other organisms in the water grow very quickly.
3. Excessive growth can spread over the river surface and form a **“green blanket.”**
4. This condition makes it difficult for fish and other aquatic organisms to breathe.
5. It can also make the river water **unsafe for people to drink**.

4. A river near your town looks clean, but household wastewater and chemicals regularly enter it. Explain why people should still be concerned and suggest solutions.

Answer:

1. Water that looks clean may still contain **harmful chemicals or dirty soapy water** that cannot easily be seen.
2. Such substances can harm the living beings that depend on the river.
3. Plastic, waste and dirty water entering rivers can also make the water polluted and unsafe for people.
4. People should reduce waste and use **eco-friendly products** to decrease the amount of harmful material reaching the river.
5. Communities should work together to prevent waste from entering water bodies and help keep rivers clean.

5. Imagine your town experiences a serious water shortage because nearby water sources have dried up. What problems could occur and how can people conserve the available water?

Answer:

1. People may struggle to obtain enough water for **drinking, bathing, cooking and cleaning**.
2. If water remains unavailable for a long time, families may even have to move to places where water is available.

3. People should use water efficiently and turn off taps when water is not needed.
4. Leaking taps should be fixed, and clean water left after washing fruits and vegetables can be reused for watering plants.
5. Families should encourage one another to conserve water because **every drop counts**.

2.13 Five-mark questions with Answers of Applied Type: (6 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Your school is located near a river where people often throw plastic bags and other waste. As a student, what actions would you take to protect the river?

Answer:

1. I would make sure that **plastic and other waste are never thrown into the river**.
2. I would encourage my classmates and family members to use **eco-friendly products** and create less waste.
3. I would help spread awareness about how polluted river water can harm people, fish, turtles and birds.
4. I would participate in activities that prevent waste from reaching nearby water bodies.
5. I would encourage everyone to take small steps regularly because they can help keep the river **clean and full of life**.

2. Heavy rain has caused a river near your village to overflow. What five safety measures would you follow during the flood?

Answer:

1. I would **follow evacuation orders** and move to higher ground.
2. I would avoid walking, driving or swimming in **floodwater**.
3. I would stay away from **power lines** to prevent electrical accidents.
4. I would communicate with my family and inform them that I am safe.
5. I would not return home or visit the disaster area until authorities declare it safe.

3. Your family wants to reduce its daily water consumption. Suggest five practices that you can follow at home.

Answer:

1. We should **turn off the tap while brushing our teeth**.
2. We should avoid wasting drinking water and use only as much water as necessary.
3. We should get **leaking taps fixed** with the help of adults.
4. We can reuse clean water left after washing fruits and vegetables for **watering plants**.
5. We should remind family members and friends to save water because **every drop counts**.

4. Farmers near your village notice excessive plant growth forming a “green blanket” over the river. Explain the likely cause and suggest what should be done.

Answer:

1. Fertilisers used on nearby farms may have been **washed into the river**.
2. These fertilisers can make plants and other organisms in the water grow very quickly.
3. Excessive growth may cover the river surface like a **“green blanket.”**
4. This can make it difficult for fish to breathe and can make the water unsafe for people to drink.
5. Therefore, steps should be taken to **prevent fertilisers from being washed into the river** and protect its water from pollution.

5. Imagine you are the Sarpanch or Municipal Corporator of a flood-prone village. What actions would you plan to protect the community?

Answer:

1. I would take measures to **prevent flooding and reduce the damage** caused by floods.

2. I would prepare evacuation plans and identify **safe alternative routes** for people.
3. I would make special arrangements to keep **elderly people and people with disabilities safe**.
4. I would arrange to move cattle and other animals to safer places when flooding is expected.
5. I would encourage every family to keep a **disaster emergency kit** ready for emergencies.

6. Your town is facing a long period of water shortage. How would you help your family manage the available water?

Answer:

1. I would ensure that water is used **efficiently and never wasted unnecessarily**.
2. I would turn off taps whenever water is not being used.
3. I would make sure that leaking taps are repaired with the help of adults.
4. I would reuse suitable clean water, such as water left after washing fruits and vegetables, for plants.
5. I would encourage everyone in my family to practise water conservation so that the available water lasts longer.

2.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams: (20 MCQs of LOTS & 20 MCQs of HOTS Type)

Olympiad-Type Multiple Choice Questions:

1. The Godavari becomes wider and stronger during its journey mainly because:

- A) seawater enters the river
- B) rainwater and tributaries join it
- C) dams increase its length
- D) water evaporates from it

Answer: B) Rainwater and tributaries join it

2. A river flows throughout the year, while another flows mainly during the rainy season. They are respectively called:

- A) seasonal and perennial
- B) tributary and delta
- C) perennial and seasonal
- D) reservoir and perennial

Answer: C) Perennial and seasonal

3. Which sequence correctly represents the Godavari's journey?

- A) Bay of Bengal → Trimbakeshwar → tributaries → delta
- B) Trimbakeshwar → tributaries join → delta → Bay of Bengal
- C) Delta → Western Ghats → Trimbakeshwar → Bay of Bengal
- D) Tributaries → Bay of Bengal → Trimbakeshwar → delta

Answer: B) Trimbakeshwar → tributaries join → delta → Bay of Bengal

4. Which of the following best describes a tributary?

- A) A wall built across a river
- B) A small stream that joins a larger river
- C) A river that flows only in summer
- D) A large water body behind a dam

Answer: B) A small stream that joins a larger river

5. A river spreads into many small streams just before reaching the sea. Which feature is being formed?

- A) Reservoir

- B) Dam
- C) Delta
- D) Canal

Answer: C) Delta

6. Which combination correctly identifies the source and destination of the Godavari?

- A) Trimbakeshwar – Bay of Bengal
- B) Coringa – Arabian Sea
- C) Nashik – Indian Ocean
- D) Bay of Bengal – Western Ghats

Answer: A) Trimbakeshwar – Bay of Bengal

7. Which statement about a dam is most accurate according to the chapter?

- A) It only prevents floods.
- B) It changes freshwater into seawater.
- C) It blocks river flow and stores water in a reservoir.
- D) It prevents people from using river water.

Answer: C) It blocks river flow and stores water in a reservoir.

8. Which of the following is NOT mentioned as a use of water stored by dams?

- A) Drinking
- B) Growing crops
- C) Making electricity
- D) Making seawater salty

Answer: D) Making seawater salty

9. Which represents a possible negative effect of constructing a dam?

- A) Formation of tributaries
- B) Flooding of land where people and animals lived
- C) Prevention of all rainfall
- D) Conversion of seasonal rivers into seas

Answer: B) Flooding of land where people and animals lived

10. A river looks perfectly clear. Which conclusion is scientifically most appropriate based on the chapter?

- A) It must be safe to drink.
- B) It cannot contain chemicals.
- C) It may still contain harmful substances.
- D) It contains only freshwater.

Answer: C) It may still contain harmful substances.

11. In the chapter's experiment, sugar and cooking oil are separately added to water. What concept does this demonstrate?

- A) All substances dissolve in water.
- B) Some substances dissolve in water while others do not.
- C) Oil changes into sugar in water.
- D) Water cannot dissolve any substance.

Answer: B) Some substances dissolve in water while others do not.

12. Fertilisers from nearby farms enter a river. Which sequence is most likely according to the chapter?

- A) Fertiliser → rapid plant growth → green blanket → difficulty for fish
- B) Fertiliser → cleaner water → more oxygen → cleaner river
- C) Fertiliser → less plant growth → more drinking water
- D) Fertiliser → dam formation → flood prevention

Answer: A) Fertiliser → rapid plant growth → green blanket → difficulty for fish

13. Why does the “green blanket” described in the chapter create a problem for aquatic life?

- A) It makes the river deeper.
- B) It makes it difficult for fish to breathe.
- C) It turns freshwater into seawater.
- D) It stops rainfall.

Answer: B) It makes it difficult for fish to breathe.

14. Which situation is most likely to increase the risk of flooding?

- A) Planting more trees
- B) Reducing surface runoff
- C) Cutting down trees
- D) Allowing soil to soak up rainwater

Answer: C) Cutting down trees

15. Why do trees help reduce the possibility of flooding?

- A) They stop rivers from flowing.
- B) They slow rainwater and help the soil soak up water.
- C) They increase the speed of surface runoff.
- D) They prevent clouds from forming.

Answer: B) They slow rainwater and help the soil soak up water.

16. During a flood, which combination of actions is safest?

- A) Swim in floodwater + touch power lines
- B) Drive through floodwater + remain in a low area
- C) Move to higher ground + follow evacuation orders
- D) Return home immediately + ignore official instructions

Answer: C) Move to higher ground + follow evacuation orders

17. Which item would be most appropriate for a flood emergency bag according to the chapter?

- A) Decorative lights
- B) Food, medicines and a flashlight
- C) Heavy furniture
- D) Sports equipment

Answer: B) Food, medicines and a flashlight

18. Which situation best demonstrates water conservation?

- A) Keeping the tap running while brushing
- B) Throwing leftover clean water away
- C) Reusing water from washing vegetables to water plants
- D) Ignoring a leaking tap

Answer: C) Reusing water from washing vegetables to water plants

19. Study the relationship:

Heavy rainfall : Flooding :: Long-term lack of water : _____

- A) Delta formation
- B) Water shortage
- C) Tributary formation
- D) Ecotourism

Answer: B) Water shortage — The chapter explains that both excess water and lack of water can seriously affect people's lives.

20. A new city is being planned near a river. Which combination would provide the most sustainable approach?

- A) Dump waste into the river + cut trees + waste water
- B) Protect the river + reduce flood risk + conserve water

- C) Remove vegetation + increase pollution + ignore floods
 D) Use all available water + allow untreated waste into the river

Answer: B) Protect the river + reduce flood risk + conserve water

2.15 Best Practices Opportunity List from the Chapter: (8 Ideas)

“Best Practices” Opportunities for Teaching:

- (1) **River Journey Mapping:** Ask students to trace the **journey of the Godavari** on the map provided in the chapter—from Trimbakeshwar through different regions to the Bay of Bengal—and identify tributaries, dams and wildlife areas. This develops **map-reading and observation skills** while reinforcing the river's journey.
- (2) **Learning through Simple Experiments:** Conduct the chapter's **sugar-and-oil-in-water activity** so students can directly observe that some substances dissolve in water while others do not. Connect the observation to the idea that harmful substances may sometimes be present even when water looks clean.
- (3) **Local Water-Body Observation:** Encourage students to observe a nearby **river, pond, lake or stream** and identify signs of cleanliness or pollution. They can also interview parents or grandparents about how local water bodies have changed over time, as suggested in the chapter.
- (4) **Flood-Safety Role Play:** Organise a role-play in which students act as a **Sarpanch or Municipal Corporator** and decide how to prevent flood damage, evacuate people, protect elderly persons and people with disabilities, and keep animals safe. This develops **decision-making, teamwork and disaster-preparedness skills**.
- (5) **Water Conservation Practice:** Create a classroom **“Every Drop Counts” challenge** in which students practise actions such as turning off taps, reporting leaks and reusing suitable water for plants. Students can maintain a simple weekly record of the water-saving practices followed at home and school.
- (6) **River Pollution Cause-and-Effect Activity:** Give students cards containing terms such as **plastic waste, dirty water, fertilisers, green blanket, unsafe water and harm to fish**, and ask them to arrange them into cause-and-effect chains. This helps students understand how human activities affect river ecosystems.
- (7) **Poster-Based Collaborative Learning:** Divide students into groups to prepare posters showing how rivers support **homes, farms, fishermen and other livelihoods**, following the activity suggested in the chapter. Display the posters and allow each group to explain its observations to the class.
- (8) **Problem-Solving through Real-Life Scenarios:** Present situations such as **“The river is polluted,” “A flood warning has been issued,” “The reservoir is drying up,” or “A new city is being built near a river.”** Ask students to propose practical solutions for keeping the river clean, reducing flood risk and ensuring sufficient water during summer, reflecting the chapter's concluding activity.

2.16 Innovations Opportunity List from the Chapter: (8 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

- (1) **Interactive “I Am a River” Journey Simulation:** Convert the classroom into the journey of the **Godavari**, with stations representing Trimbakeshwar, tributaries, dams, forests, villages, the delta and the Bay of Bengal. Students can move from station to station as “water drops” and explain what happens at each stage. This makes the river's 1,465-km journey memorable through **experiential learning**.
- (2) **Build-a-River STEM Model:** Students can create a miniature river system using **clay, soil, sand, stones and water**. They can model tributaries, a dam and reservoir and

observe how water flows, is stored and may overflow. This introduces **STEM learning through model building and observation**, directly supporting the chapter's discussion of dams and reservoirs.

- (3) **“Pollution Detective” Investigation:** Provide two simulated water samples—one visibly dirty and another apparently clean—and ask students to decide whether appearance alone can establish that water is safe. Connect their reasoning with the chapter's point that **harmful substances may be present even when water looks clean**.
- (4) **Green Blanket Demonstration:** Create a simple visual model showing how fertilisers entering a river can encourage excessive plant growth and form a **“green blanket.”** Students can then predict what might happen to fish and water quality, encouraging **cause-and-effect reasoning**.
- (5) **Flood-Ready Classroom Challenge:** Turn flood safety into a team challenge in which students select items for a **disaster emergency kit**, identify safe evacuation actions and arrange flood-safety cards under “Before,” “During” and “After.” This transforms safety information into an engaging **problem-solving activity**.
- (6) **Digital River Storytelling:** Students can create a short **digital story, slideshow or narrated animation** in which the Godavari speaks in the first person, similar to the chapter's storytelling approach. The story can cover its source, tributaries, uses, pollution, floods and conservation, combining **EVS with digital literacy and creativity**.
- (7) **Water-Saving Audit:** Students can become **“Water Detectives”** at home or school by observing leaking taps, unnecessary water use and opportunities for reuse. They can prepare a simple chart showing the problem, suggested solution and action taken, based on practices such as turning off taps and reusing suitable water for plants.
- (8) **Design-a-River-Friendly City Challenge:** Give groups a large sheet and ask them to design a new city beside a river. Their plan must show ways to **keep the river clean, reduce flood risks and ensure enough water during summer**, directly extending the chapter's final reflection task into **design-thinking and collaborative learning**.

2.17: Practicing Questions/Question Bank:

A. Fill in the Blanks:

1. The Godavari River begins at _____ in Maharashtra.
Answer: Trimbakeshwar
2. Smaller streams that join a larger river are called _____.
Answer: Tributaries
3. The Godavari finally joins the _____.
Answer: Bay of Bengal
4. A river that flows throughout the year is called a _____ river.
Answer: Perennial
5. A river that flows mainly when it receives water during the rainy season is called a _____ river.
Answer: Seasonal
6. When a river spreads into smaller streams before entering the sea, it forms a _____.
Answer: Delta

7. Water stored behind a dam is called a _____.
Answer: Reservoir
 8. Dams can store water for drinking, growing crops and making _____.
Answer: Electricity
 9. Plastic, waste and dirty water can _____ rivers.
Answer: Pollute
 10. Excess fertilisers entering water can cause a _____ blanket to form on its surface.
Answer: Green
 11. Too much rain can cause a river to overflow its _____.
Answer: Banks
 12. Trees help the soil _____ rainwater.
Answer: Soak up
 13. During a flood, people should move to _____ ground.
Answer: Higher
 14. A leaking _____ should be repaired to prevent water wastage.
Answer: Tap
 15. Water used for washing fruits and vegetables can be reused for watering _____.
Answer: Plants
-

B. One-Mark Descriptive Questions:

1. **Where does the Godavari River begin?**
Answer: The Godavari begins at Trimbakeshwar in the Western Ghats of Maharashtra.
2. **What is a tributary?**
Answer: A tributary is a smaller stream or river that joins a larger river.
3. **Where does the Godavari end its journey?**
Answer: The Godavari ends its journey by joining the Bay of Bengal.
4. **What is a perennial river?**
Answer: A perennial river is a river that flows throughout the year.
5. **What is a seasonal river?**
Answer: A seasonal river flows when it receives water, mainly during the rainy season.
6. **What is a delta?**
Answer: A delta is formed when a river spreads into smaller streams as it approaches the sea.
7. **What is a reservoir?**
Answer: A reservoir is the large body of water stored behind a dam.
8. **Mention one benefit of a dam.**
Answer: A dam stores water that can be used during dry seasons.
9. **What is water pollution?**
Answer: Water pollution occurs when waste, plastic, dirty water or other harmful substances contaminate water.

10. Why can clear-looking water still be unsafe?

Answer: Clear-looking water may contain harmful substances that cannot be seen.

11. What is a flood?

Answer: A flood occurs when excess river water overflows its banks and spreads over nearby land.

12. How do trees help reduce flooding?

Answer: Trees slow down rainwater and help the soil soak it up.

C. Two-Mark Descriptive Questions:**1. Differentiate between perennial and seasonal rivers.**

Answer:

1. A **perennial river** flows throughout the year.
2. A **seasonal river** flows mainly when it receives water during the rainy season.

2. Mention any two ways rivers help people.

Answer:

1. Rivers provide water for **drinking, cooking and washing**.
2. They provide water for **growing crops and supporting livelihoods**.

3. State two benefits of dams.

Answer:

1. Dams store water for use during **dry seasons**.
2. Stored water can be used for crops, drinking and **generating electricity**.

4. State two disadvantages of building dams.

Answer:

1. Reservoirs may **flood large areas of land**.
2. People and animals living there may have to **move elsewhere**.

5. How does river pollution affect living beings?

Answer:

1. Polluted water can make **people sick**.
2. Pollution can harm fish, turtles, birds and other organisms living around rivers.

6. Why should we plant trees in areas where flooding occurs?

Answer:

1. Trees help **slow down rainwater**.
2. They help the soil absorb more water instead of allowing it to flow quickly over the land.

7. Mention two things people should do during a flood.

Answer:

1. People should move to **higher and safer ground**.
2. They should avoid walking, swimming or driving through floodwater.

8. Give two ways of conserving water at home.

Answer:

1. Turn off the tap while **brushing your teeth**.
2. Reuse suitable water from washing fruits and vegetables for **watering plants**.

D. Three-Mark Descriptive Questions:

1. Describe the journey of the Godavari River.

Answer:

1. The Godavari begins at **Trimbakeshwar in the Western Ghats of Maharashtra**.
2. Rainwater and other streams called **tributaries** join it as it travels.
3. After travelling about **1,465 km**, it finally joins the Bay of Bengal.

2. Explain three ways in which rivers are useful to people.

Answer:

1. Rivers provide water for **drinking, cooking and washing**.
2. Farmers use river water to **grow crops**.
3. Rivers also support factories and the **livelihoods of many people**.

3. Explain how human activities can pollute a river.

Answer:

1. People may throw **waste and plastic** into or near rivers.
2. Dirty water from homes and other activities can enter rivers.
3. Such pollution makes water unsafe and can harm people and aquatic life.

4. How can fertilisers affect a river ecosystem?

Answer:

1. Fertilisers from fields can be washed into rivers.
2. They can cause rapid growth of plants and other organisms, creating a **green blanket**.
3. This can make it difficult for fish to breathe and make the water unsafe.

5. Explain three safety measures to follow during a flood.

Answer:

1. Move to **higher ground** and follow evacuation instructions.

2. Do not walk, swim or drive through floodwater.
3. Stay away from fallen or damaged **power lines**.

6. How can students help conserve water?

Answer:

1. They can turn off taps whenever water is not needed.
2. They can report leaking taps and get adults to repair them.
3. They can reuse suitable clean water and encourage others to **save every drop**.

E. Five-Mark Descriptive Questions:

1. Explain how rivers support human life and livelihoods.

Answer:

1. Rivers provide water to **towns and villages**.
2. People use river water for drinking, cooking and washing.
3. Farmers depend on river water to **grow food crops**.
4. Water is also used by factories and for different occupations.
5. Thus, rivers are closely connected with people's **daily lives and livelihoods**.

2. Explain the advantages and disadvantages of dams.

Answer:

1. Dams block river water and store it in a **reservoir**.
2. The stored water can be used during dry seasons.
3. It provides water for drinking, crops and making electricity.
4. However, reservoirs may flood land where people and animals live.
5. As a result, some people and animals may have to move to other places.

3. Explain the causes and effects of river pollution.

Answer:

1. Waste, plastic and dirty water can enter rivers and cause pollution.
2. Harmful substances may sometimes be present even when the water looks clear.
3. Fertilisers washed from farms can cause excessive growth of organisms in water.
4. Pollution can make water unsafe and create difficulties for aquatic animals such as fish.
5. Therefore, reducing waste and using eco-friendly products can help protect rivers.

4. What happens during a flood? Explain the effects of flooding and suitable safety measures.

Answer:

1. Heavy rainfall can make a river faster, deeper and bigger until it **overflows its banks**.
2. Floodwater may damage houses, fields and roads.
3. People and animals may need to leave the affected area for safety.
4. People should move to higher ground and avoid walking or driving through floodwater.
5. They should follow evacuation instructions and return only when the area is declared safe.

5. Suggest five actions that children and families can take to conserve water.

Answer:

1. Use water **efficiently** and avoid unnecessary wastage.
2. Turn off the tap while brushing your teeth.
3. Do not waste drinking water.
4. Repair leaking taps and reuse suitable water from washing fruits and vegetables for plants.
5. Encourage friends and family members to conserve water because **every drop counts**.



5th Standard World Around Us Book Chapter 3

Chapter 3: The Mystery of Food

3.1 Summary of the Chapter:

Chapter 3: The Mystery of Food — Summary:

- (1) **Food spoilage is mainly caused by microbes.** Microbes are tiny living organisms found in air, water, soil, plants, animals, and even inside our bodies. Some microbes growing on food can cause changes in its colour, smell, taste, and texture.
- (2) **Microbes need suitable conditions to grow.** They grow well when they get **moisture, air, and the right temperature**. Controlling these conditions helps prevent food from spoiling.
- (3) **Food preservation helps food remain safe for a longer time.** Traditional and modern methods prevent or slow the growth of microbes and reduce food wastage. The chapter introduces several methods of preserving food.
- (4) **Drying and dehydration preserve food by removing moisture.** For example, chillies can be dried in the Sun and stored for a long period because microbes cannot grow easily without moisture.
- (5) **Pickling and oiling help protect food from air.** Oil forms a protective layer that keeps air away from food and thereby reduces the growth of microbes. This is why oil is commonly used in traditional pickles.
- (6) **Refrigeration and freezing slow down microbial growth.** Low temperatures make it difficult for microbes to grow quickly. Other preservation methods include using **salt, sugar and spices**, as well as storing food in **airtight cans and packages**.
- (7) **Not all microbes are harmful.** Some useful microbes help us prepare foods such as **idli batter and curd**. Good microbes present in curd can also support digestion.
- (8) **Fresh, local and seasonal foods are important.** The chapter encourages children to observe how fresh fruits and vegetables are selected and explains the enjoyment and value of eating fruits and vegetables during their natural season.
- (9) **Different types of teeth perform different functions.** **Incisors cut, canines tear, premolars crush, and molars grind** food. Proper chewing breaks food into smaller pieces and releases saliva, which helps in digestion.
- (10) **Good eating habits and oral hygiene are essential for health.** We should chew food properly, eat slowly to avoid choking, rinse the mouth after eating, brush our teeth regularly, and limit sweets. The chapter concludes that we should **eat right, preserve and store food properly, chew well, and appreciate the role of useful microbes**.

3.2 Important Formulas:

Important Formulas – Chapter 3: The Mystery of Food:

This chapter is mainly **conceptual and activity-based**. It does **not introduce any mathematical formulas or numerical equations** for solving quantitative problems. The main concepts involve food spoilage, microbes, food preservation, digestion, teeth, and oral hygiene. Therefore, for the question bank, the **Formulas** section can be written as:

No specific mathematical formulas are prescribed in this chapter.

However, students should remember these important **concept relationships**:

- (1) **Microbial growth → Moisture + Air + Suitable Temperature**
- (2) **Drying/Dehydration → Removal of moisture → Reduced microbial growth**
- (3) **Oiling → Keeps air away → Reduces microbial growth**
- (4) **Refrigeration/Freezing → Low temperature → Slower microbial growth**

- (5) Proper chewing → Food broken into smaller pieces + Saliva released → Better digestion
- (6) Incisors → Cutting
- (7) Canines → Tearing
- (8) Premolars → Crushing
- (9) Molars → Grinding

Conclusion: There are **no quantitative formulas required for Chapter 3 – “The Mystery of Food.”** Assessment should focus more on **observation, reasoning, comparison, application, and cause-and-effect relationships** rather than numerical problem-solving.

3.3 Fill-Up the Blank LOTS type questions with Answers: (30 Questions)

LOTS Type – Fill in the Blanks with Answers:

1. Tiny living things that grow on food are called _____.
Answer: Microbes
2. We need an instrument called a _____ to see microbes.
Answer: Microscope
3. The coloured patches seen on Disha’s spoiled uttapam were _____.
Answer: Mould
4. Microbes are found in soil, water and the _____ around us.
Answer: Air
5. Microbes need moisture, air and the right _____ to grow.
Answer: Temperature
6. Drying food in the Sun removes its _____.
Answer: Moisture
7. Disha’s parents dried _____ in the Sun to make powder.
Answer: Chillies
8. Oil prevents _____ from getting into pickles.
Answer: Air
9. Oil stops the growth of _____ in pickles.
Answer: Microbes
10. A refrigerator makes the temperature too _____ for microbes to grow easily.
Answer: Cold
11. Cold temperature _____ down the growth of microbes.
Answer: Slows
12. People traditionally used salt, sugar and _____ to preserve food.
Answer: Spices
13. A clay pot or _____ is used to keep water cool.
Answer: Matka
14. Food factories use airtight cans and _____ to keep microbes away from food.
Answer: Packaging
15. Microbes present in the air help make _____ batter rise.
Answer: Idli
16. Good microbes in curd help us in _____.
Answer: Digestion
17. Bad eating habits can sometimes lead to _____.
Answer: Indigestion
18. Fruits taste best when they are eaten in their _____.
Answer: Season
19. _____ are the teeth used for cutting food.
Answer: Incisors

20. _____ are the teeth used for tearing food.
Answer: Canines
21. Premolars are used to _____ food.
Answer: Crush
22. Molars are used to _____ food.
Answer: Grind
23. Chewing food properly releases _____, which helps in digestion.
Answer: Saliva
24. A hole in a tooth is called a _____.
Answer: Cavity
25. We should rinse our mouth after _____.
Answer: Eating
26. We should brush our teeth _____ to maintain oral hygiene.
Answer: Regularly
27. We should eat fewer _____ to protect our teeth.
Answer: Sweets
28. We should eat food _____ to avoid choking.
Answer: Slowly
29. We should take smaller _____ and chew them properly before swallowing.
Answer: Mouthfuls
30. Some microbes spoil food, while others help us to _____ food items.
Answer: Make

3.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)

HOTS Type – Fill in the Blanks with Answers:

The following questions require students to **apply, analyse, predict, compare, and infer** using ideas from the chapter.

1. Riya left wet bread in a warm place for two days. Coloured patches appeared because the conditions encouraged the growth of _____.
Answer: microbes
2. If chillies are completely dried before storage, microbes cannot grow easily because the _____ has been removed.
Answer: moisture
3. A pickle without a layer of oil may spoil faster because _____ can come in contact with the food.
Answer: air
4. If milk is kept in a refrigerator instead of on a warm kitchen table, microbial growth will be _____.
Answer: slower
5. Food kept in an airtight container remains protected because the container helps keep _____ away from the food.
Answer: air
6. Two pieces of tomato are kept in sunlight and shade. The one in sunlight may lose more _____ through drying.
Answer: moisture
7. If a family wants chillies to last throughout the year, a suitable preservation method would be _____.
Answer: drying/dehydration

8. If vegetables are kept at a low temperature, the activity of microbes will be _____.
Answer: slowed down
9. A family wants to preserve green mangoes by preventing air from reaching them. They can cover the pickle with _____.
Answer: oil
10. If food factories want to prevent microbes from reaching preserved food, they can use _____ cans and packaging.
Answer: airtight
11. Idli batter becomes fluffy because helpful _____ present in the air act on it.
Answer: microbes
12. A child suffering from mild indigestion may be given curd or buttermilk because they contain _____ microbes that support digestion.
Answer: good
13. If indigestion becomes severe even after using home remedies, the appropriate person to consult is a _____.
Answer: doctor
14. A child who frequently develops indigestion should examine his or her _____ habits.
Answer: eating
15. If mangoes grown nearby are eaten during their natural season, they are likely to be fresher because they do not have to travel _____.
Answer: far
16. If you need to bite a piece from a fruit, the teeth mainly used for cutting are the _____.
Answer: incisors
17. When a person needs to tear food, the _____ are especially useful.
Answer: canines
18. When hard food needs to be crushed before grinding, the _____ help perform this function.
Answer: premolars
19. If food has to be ground thoroughly before swallowing, the _____ are mainly used.
Answer: molars
20. A child who chews food thoroughly produces more _____, which helps in digestion.
Answer: saliva
21. If a child eats very quickly without chewing properly, the risk of _____ increases.
Answer: choking
22. Talking or laughing with food in the mouth should be avoided because it may increase the danger of _____.
Answer: choking
23. A child who wants to reduce the risk of cavities should brush regularly and eat fewer _____.
Answer: sweets
24. If a child has persistent toothache, the appropriate health professional to visit is a _____.
Answer: dentist

25. If food is broken into smaller pieces before swallowing, digestion becomes easier because proper chewing also releases _____.
Answer: saliva
26. If all microbes were considered harmful, this conclusion would be incorrect because some microbes help make food and assist in _____.
Answer: digestion
27. A student compares fresh bread and mouldy bread. The mouldy bread indicates the growth of a colony of thousands of _____.
Answer: microbes
28. If moisture is removed from food and air is also kept away, the conditions required for microbial _____ become less favourable.
Answer: growth
29. A student wants to preserve food without refrigeration. Depending on the food, drying, oiling, salt or _____ could be used as traditional preservation methods.
Answer: sugar
30. From Disha's investigations, we can conclude that eating right, storing and preserving food properly, and chewing well contribute to better _____.
Answer: health

3.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

1. **What are microbes?**
Answer: Microbes are tiny living things that are found all around us.
2. **Which instrument is used to see microbes?**
Answer: A microscope is used to see microbes.
3. **What was the coloured growth found on Disha's spoiled uttapam?**
Answer: The coloured growth on Disha's spoiled uttapam was **mould**.
4. **Where are microbes found?**
Answer: Microbes are found in **soil, water, air, plants, animals, and inside us**.
5. **What conditions do microbes need to grow?**
Answer: Microbes need **moisture, air, and the right temperature** to grow.
6. **What is food preservation?**
Answer: Food preservation is the process of protecting food from spoilage so that it can be kept for a longer time.
7. **How does drying help in preserving food?**
Answer: Drying removes **moisture** from food and prevents microbes from growing.
8. **Why are chillies dried in the Sun?**
Answer: Chillies are dried in the Sun to remove moisture and preserve them for a longer time.
9. **Why is oil added to pickles?**
Answer: Oil is added to pickles to keep **air away** and stop the growth of microbes.
10. **How does refrigeration help to preserve food?**
Answer: Refrigeration keeps food cold and **slows down the growth of microbes**.
11. **Name any two traditional substances used for preserving food.**
Answer: **Salt and sugar** are two substances traditionally used to preserve food.
12. **Why are airtight cans used to preserve food?**
Answer: Airtight cans are used to **keep microbes away from food**.
13. **What is a matka used for?**
Answer: A **matka** or clay pot is used to keep water cool.

14. **What helps idli batter to rise?**

Answer: Microbes present in the air help idli batter to rise.

15. **How do the good microbes in curd help us?**

Answer: Good microbes in curd help us in **digestion**.

16. **What can sometimes cause indigestion?**

Answer: Bad eating habits can sometimes cause indigestion.

17. **When do fruits taste best?**

Answer: Fruits taste best when they are eaten in their **season**.

18. **What is the function of incisors?**

Answer: Incisors are used to cut food.

19. **What is the function of canines?**

Answer: Canines are used to tear food.

20. **What is the function of premolars?**

Answer: Premolars are used to crush food.

21. **What is the function of molars?**

Answer: Molars are used to grind food.

22. **Why should we chew food properly?**

Answer: Proper chewing breaks food into smaller pieces and releases **saliva**, which helps in digestion.

23. **What is a cavity?**

Answer: A cavity is a hole in a tooth.

24. **Mention one way to maintain oral hygiene.**

Answer: We should **brush our teeth regularly** to maintain oral hygiene.

25. **Why should we eat fewer sweets?**

Answer: We should eat fewer sweets to help **protect our teeth from cavities**.

26. **Whom should we visit if we have a toothache?**

Answer: We should visit a **dentist** if we have a toothache.

27. **How can we reduce the risk of choking while eating?**

Answer: We should take smaller mouthfuls and **chew food properly before swallowing**.

28. **What should we avoid doing when food is in our mouth?**

Answer: We should avoid **talking or laughing** when food is in our mouth.

29. **Are all microbes harmful?**

Answer: No, some microbes are useful because they help us **make food items and digest food**.

30. **What is the main message of “The Mystery of Food”?**

Answer: We should **eat right, preserve and store food properly, and chew food well**.

3.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – HOTS Type:

1. **Why did Disha’s forgotten uttapam develop coloured patches?**

Answer: Microbes grew on the uttapam and caused mould to develop on it.

2. **Why can we not normally see individual microbes with our eyes?**

Answer: Individual microbes are extremely tiny and require a microscope to be seen.

3. **Why is mould visible even though individual microbes are very small?**

Answer: Mould becomes visible because it consists of a colony of thousands of microbes.

4. Why is wet food likely to spoil faster than properly dried food?

Answer: Wet food provides the moisture that microbes need for growth.

5. What would happen to microbial growth if moisture were removed from food?

Answer: Microbial growth would be reduced because microbes need moisture to grow.

6. Why can sun-dried chillies be stored for a longer time?

Answer: Sun-drying removes moisture from the chillies and prevents microbes from growing easily.

7. What might happen if a pickle is stored without a layer of oil?

Answer: The pickle may spoil faster because air can reach it and support microbial growth.

8. Why does food generally last longer in a refrigerator?

Answer: Food lasts longer in a refrigerator because cold temperature slows down microbes.

9. Why would an airtight container be useful for storing preserved food?

Answer: An airtight container helps keep air and microbes away from the food.

10. Why can salt, sugar and spices be considered useful in food preservation?

Answer: They are traditional substances used to help keep food from spoiling.

11. If all microbes disappeared, how might idli preparation be affected?

Answer: Idli batter may not rise properly because microbes help make it rise.

12. Why is it incorrect to say that all microbes are harmful?

Answer: Some microbes are useful because they help make foods such as curd and also support digestion.

13. Why might curd or buttermilk be given to someone with an upset stomach?

Answer: Their good microbes can join the good microbes in the stomach and help in digestion.

14. What should a person do if an upset stomach becomes severe?

Answer: The person should consult a doctor and take medicines as advised.

15. Why might locally grown mangoes be fresher than mangoes brought from far away?

Answer: Local mangoes may be fresher because they do not have to travel a long distance to reach us.

16. Why is eating seasonal fruits encouraged in the chapter?

Answer: Seasonal fruits taste best when eaten in their natural season.

17. Which teeth would you mainly use to bite into a piece of food, and why?

Answer: I would mainly use my incisors because they are meant for cutting food.

18. Which teeth would be most useful for grinding food before swallowing?

Answer: Molars would be most useful because they are designed to grind food.

19. Why are different types of teeth needed in our mouth?

Answer: Different teeth are needed because they perform different functions such as cutting, tearing, crushing and grinding.

20. Why does proper chewing help digestion?

Answer: Proper chewing breaks food into smaller pieces and releases saliva that helps in digestion.

21. Why should a child with a toothache visit a dentist?

Answer: A dentist can examine the aching tooth and identify problems such as a cavity.

22. Why should we rinse our mouth after eating?

Answer: Rinsing the mouth after eating is an important practice for maintaining oral hygiene.

23. Why should a child avoid eating too many sweets?

Answer: A child should eat fewer sweets as part of maintaining good oral hygiene and protecting the teeth.

24. Why is gulping food unsafe?

Answer: Gulping food without proper chewing can increase the danger of choking.

25. Why should we avoid talking or laughing while eating?

Answer: We should avoid talking or laughing with food in our mouth to reduce the risk of choking.

26. A child is eating very quickly; what advice would you give to prevent choking?

Answer: I would advise the child to take smaller mouthfuls, eat slowly and chew properly before swallowing.

27. A family wants to store chillies for several months; which method would you suggest?

Answer: I would suggest drying the chillies in the Sun to remove their moisture.

28. Milk is left outside while vegetables are kept in the refrigerator; which is better protected from microbial growth?

Answer: The refrigerated vegetables are better protected because cold temperature slows down microbes.

29. What can you infer if food develops a foul smell and coloured patches?

Answer: We can infer that the food has spoiled due to the growth and activity of microbes.

30. What lesson can we apply to daily life from Disha's investigation?

Answer: We should eat right, preserve and store food properly, chew well and recognise that some microbes are useful.

3.7 Two-mark questions with Answers of LOTS Type: (20 Questions)**Two-Mark Descriptive Questions with Answers – LOTS Type:****1. What are microbes? Where are they found?**

Answer:

1. Microbes are tiny living things that can be seen with the help of a microscope.
2. They are found in soil, water, air, plants, animals, and inside us.

2. What conditions do microbes need to grow?

Answer:

1. Microbes need **moisture and air** to grow.
2. They also need the **right temperature** for their growth.

3. How does drying help in preserving food?

Answer:

1. Drying removes **moisture** from food.
2. Without moisture, microbes cannot grow easily and the food remains unspoilt for longer.

4. Why is oil added to pickles?

Answer:

1. Oil forms a layer that prevents **air from reaching the pickle**.
2. This stops the growth of microbes and helps keep the pickle safe.

5. How does refrigeration help in food preservation?

Answer:

1. Refrigeration keeps food at a **cold temperature**.
2. Cold temperature slows down the growth of microbes.

6. Name any four substances traditionally used to preserve food.

Answer:

1. **Salt and sugar** are traditionally used to preserve food.
2. Spices such as **pepper**, along with oil, are also used in food preservation.

7. How is butter converted into ghee?

Answer:

1. Butter is heated so that water separates from it.
2. The water evaporates on further heating and **ghee** is prepared.

8. How is food preserved in food factories?

Answer:

1. Food factories preserve food in **airtight cans and packaging**.
2. Such packaging helps keep microbes away from the food.

9. Mention two useful roles of microbes.

Answer:

1. Some microbes help in making foods such as **curd and idli batter**.
2. Good microbes also help us in **digestion**.

10. How do microbes help in making idlis?

Answer:

1. Microbes present in the air act on the **idli batter**.
2. They help the batter **rise and become fluffy**.

11. What does the chapter say about indigestion and its care?

Answer:

1. Bad eating habits can sometimes lead to **indigestion**.
2. If the problem is severe, a person should consult a **doctor** and take medicines.

12. What did Disha learn about seasonal and local fruits?

Answer:

1. Fruits taste best when they are eaten in their **season**.
2. Local fruits can be fresh because they do not have to travel far to reach us.

13. What are the functions of incisors and canines?

Answer:

1. **Incisors** are used for cutting food.
2. **Canines** are used for tearing food.

14. What are the functions of premolars and molars?

Answer:

1. **Premolars** are used for crushing food.
2. **Molars** are used for grinding food.

15. How does proper chewing help in digestion?

Answer:

1. Proper chewing breaks food into **smaller pieces**.
2. It releases **saliva**, which helps in digestion.

16. What advice did the dentist give Disha for good oral hygiene?

Answer:

1. The dentist advised Disha to **rinse her mouth after eating and brush her teeth regularly**.
2. The dentist also advised her to **eat fewer sweets**.

17. What is a cavity, and what should we do if a tooth aches?

Answer:

1. A **cavity is a hole in a tooth**.
2. If a tooth aches, we may need to visit a **dentist** for a check-up.

18. **Mention two ways to avoid choking while eating.**

Answer:

1. We should take **smaller mouthfuls and chew food properly** before swallowing.
2. We should avoid **talking or laughing with food in our mouth.**

19. **What did Disha finally discover about microbes?**

Answer:

1. Some microbes **spoil food**, while others help us make food items.
2. Some useful microbes also help us **digest food.**

20. **What is the final message of Disha's food investigation?**

Answer:

1. We should **eat right and preserve and store food properly.**
2. We should also **chew food well and appreciate the useful microbes.**

3.8. Two-mark questions with Answers of HOTS Type: (20 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. **Riya kept a wet piece of bread in a warm place. Why is it likely to spoil quickly?**

Answer:

1. The wet bread provides **moisture** needed by microbes.
2. A suitable temperature, moisture and air encourage microbial growth.

2. **Why would dried chillies last longer than fresh chillies?**

Answer:

1. Drying removes **moisture** from the chillies.
2. Without moisture, microbes cannot grow easily, so the chillies remain unspoiled longer.

3. **A jar of pickle has very little oil covering it. What might happen and why?**

Answer:

1. The pickle may spoil because air can reach the food.
2. A proper layer of oil keeps air out and helps stop microbial growth.

4. **Why does milk kept in a refrigerator usually remain usable longer than milk left outside?**

Answer:

1. The refrigerator provides a **cold temperature.**
2. Cold temperature slows down the growth of microbes and therefore delays spoilage.

5. **If you had to preserve chillies for several months without a refrigerator, which method would you choose and why?**

Answer:

1. I would choose **sun-drying or dehydration.**
2. It removes moisture, making conditions unsuitable for microbes to grow.

6. **Why is airtight packaging useful for preserving food in factories?**

Answer:

1. Airtight packaging prevents outside air from easily reaching the food.
2. It helps keep microbes away from the food and protects it from spoilage.

7. **A student says, "All microbes should be destroyed because they are harmful." Why is this statement incorrect?**

Answer:

1. Some microbes are useful and help in making foods such as **curd and idli batter.**

2. Some good microbes also help us in **digestion**.
8. **Why might idli batter fail to rise properly if the helpful microbes do not act on it?**
Answer:
1. Microbes in the air help the idli batter to **rise**.
 2. Without their action, the batter may not become properly fluffy.
9. **A child frequently suffers from indigestion because of poor eating habits. What two actions would you suggest?**
Answer:
1. The child should improve eating habits, as bad eating habits can lead to indigestion.
 2. If the problem becomes severe, the child should **consult a doctor**.
10. **Why may curd or buttermilk be useful when a person has an upset stomach?**
Answer:
1. Curd contains **good microbes**.
 2. These microbes join the good microbes in the stomach and help in digestion.
11. **Why might locally grown seasonal mangoes be a better choice for freshness?**
Answer:
1. Seasonal fruits taste best when eaten during their natural season.
 2. Local mangoes can be fresher because they do not have to travel far to reach us.
12. **A child uses only the front teeth while trying to grind food. Why would this be difficult?**
Answer:
1. Front teeth or **incisors** are mainly meant for cutting food.
 2. **Molars** are better suited for grinding food.
13. **Why do humans need different types of teeth instead of having all teeth of the same shape?**
Answer:
1. Different teeth perform different functions while eating.
 2. Incisors cut, canines tear, premolars crush and molars grind food.
14. **What may happen if a person swallows food without chewing it properly?**
Answer:
1. The food will not be properly broken into smaller pieces or mixed sufficiently with saliva.
 2. Gulping food without proper chewing can also increase the danger of **choking**.
15. **Why does chewing food for sufficient time help digestion?**
Answer:
1. Chewing breaks the food into **smaller pieces**.
 2. It also releases **saliva**, which helps in digestion.
16. **A child often talks and laughs while eating. What advice would you give and why?**
Answer:
1. The child should avoid talking or laughing while food is in the mouth.
 2. The child should take smaller mouthfuls and chew properly to reduce the risk of choking.
17. **Disha has another toothache after frequently eating sweets. What two changes should she make?**
Answer:

1. She should **brush regularly, rinse her mouth after eating and eat fewer sweets.**
2. If the tooth continues to ache, she should visit a **dentist** for a check-up.
18. **Two food items are stored differently—one in an open container and another in an airtight container. Which is better protected and why?**
Answer:
 1. The food in the **airtight container** is better protected.
 2. Keeping air away helps reduce the conditions favourable for microbial growth.
19. **What can you infer when stored food develops an unpleasant smell and coloured patches?**
Answer:
 1. The food has probably undergone **spoilage due to microbial growth.**
 2. Microbes can change the taste and smell of food, while colonies such as mould may appear as visible patches.
20. **Suppose food could not be preserved at all. What difficulty might people face?**
Answer:
 1. Many foods would spoil quickly because microbes could continue growing under suitable conditions.
 2. It would become difficult to store food safely for use over longer periods.

3.9. Three-mark questions with Answers of LOTS Type: (15 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. What are microbes? Mention where they are found.

Answer:

1. Microbes are **tiny living things** that are too small to be seen individually with our eyes.
2. We need an instrument called a **microscope** to see them.
3. They are found in **soil, water, air, plants, animals, and inside us.**

2. What conditions are necessary for microbes to grow?

Answer:

1. Microbes need **moisture** for their growth.
2. They also need **air** to survive.
3. A **suitable temperature** provides favourable conditions for their growth.

3. Explain how drying or dehydration helps in preserving food.

Answer:

1. Drying or dehydration removes **moisture** from food.
2. Microbes cannot grow easily without moisture.
3. Therefore, foods such as chillies can be dried in the Sun and preserved for a longer period.

4. Explain how pickling and oiling help in food preservation.

Answer:

1. Oil is poured over foods such as **pickled green mangoes.**
2. The layer of oil prevents **air from getting into the food.**
3. Keeping air away stops the growth of microbes and helps keep the pickle safe.

5. Explain the role of refrigeration and freezing in preserving food.

Answer:

1. Foods such as **milk, vegetables, butter, and cake** can be stored in a refrigerator.
2. A refrigerator provides a **cold temperature** that is unfavourable for rapid microbial growth.
3. Thus, cold temperature **slows down microbes** and helps preserve food.

6. Mention three traditional ways of preserving food.**Answer:**

1. **Salt** has traditionally been used to help keep food from spoiling.
2. **Sugar** is another substance used in food preservation.
3. **Spices such as pepper** are also traditionally used to preserve food.

7. Explain how butter is converted into ghee.**Answer:**

1. First, **butter is heated**.
2. Water separates from the butter and then **evaporates** on heating.
3. After the water evaporates, **ghee is prepared**.

8. Mention three useful roles of microbes discussed in the chapter.**Answer:**

1. Some microbes help us in making **curd**.
2. Microbes present in the air help **idli batter rise**.
3. Good microbes also help us in **digesting food**.

9. What does the chapter teach about indigestion and its care?**Answer:**

1. **Bad eating habits** can sometimes lead to indigestion.
2. Curd or buttermilk contains good microbes that can help in **digestion**.
3. If the problem is severe, we should **consult a doctor and take medicines**.

10. Describe the functions of different types of teeth.**Answer:**

1. **Incisors** are used to cut food, while **canines** are used to tear it.
2. **Premolars** are used to crush food.
3. **Molars** are used to grind food.

11. Why is proper chewing important?**Answer:**

1. Proper chewing breaks food into **smaller pieces**.
2. Chewing also releases **saliva**.
3. Saliva helps in the **digestion of food**.

12. Mention three practices for maintaining good oral hygiene.**Answer:**

1. We should **rinse our mouth after eating**.
2. We should **brush our teeth regularly**.
3. We should **eat fewer sweets** to take better care of our teeth.

13. What precautions should we take to avoid choking while eating?**Answer:**

1. We should take **smaller mouthfuls** of food.
2. We should **chew food properly before swallowing** it.
3. We should avoid **talking or laughing with food in our mouth**.

14. What did Disha learn about seasonal and local fruits?**Answer:**

1. Fruits taste best when they are eaten in their **natural season**.
2. Waiting for seasonal fruits can increase the **joy of eating them**.
3. Local fruits can be fresh because they do not have to **travel far to reach us**.

15. State Disha's final discovery about food and microbes.**Answer:**

1. Some microbes **spoil our food**.
2. Some microbes are useful because they help us **make food items and digest food**.
3. We should **eat right, preserve and store food properly, and chew well**.

3.10. Three-mark questions with Answers of HOTS Type: (15 Questions)**Three-Mark Descriptive Questions with Answers – HOTS Type:**

1. Rohan left a slice of bread in a warm and moist place for two days. Why might coloured patches appear on it?

Answer:

1. A warm and moist environment provides favourable conditions for **microbes to grow**.
2. Microbes need **moisture, air, and the right temperature** for their growth.
3. Their growth can form visible patches such as **mould** and cause the food to spoil.

2. Fresh chillies and sun-dried chillies are stored for the same period. Which are likely to last longer and why?

Answer:

1. The **sun-dried chillies** are likely to last longer.
2. Sun-drying removes moisture from the chillies.
3. Without sufficient moisture, microbes cannot grow easily and spoil the chillies.

3. A jar of mango pickle is left without enough oil on its surface. Predict what may happen and explain why.

Answer:

1. The pickle may **spoil more quickly**.
2. Without enough oil, air can come into contact with the pickle.
3. Oil normally keeps air out and helps stop the **growth of microbes**.

4. Milk is kept on a kitchen table, while another container of milk is kept in a refrigerator. Which one is better preserved? Explain.

Answer:

1. The milk kept in the **refrigerator** is better preserved.
2. A refrigerator provides a cold temperature that is less favourable for microbial growth.
3. Therefore, refrigeration **slows down microbes** and helps food last longer.

5. Your family wants to store chillies for use throughout the year without using a refrigerator. What would you suggest?

Answer:

1. I would suggest **drying the chillies thoroughly in the Sun**.
2. Sun-drying removes moisture from them.
3. Since microbes cannot grow easily without moisture, the dried chillies can be preserved for a longer period.

6. A student says, “All microbes are harmful because they spoil food.” Do you agree? Give reasons.

Answer:

1. No, **all microbes are not harmful**.
2. Some microbes help in making foods such as **curd**, and microbes in the air help idli batter rise.
3. Good microbes present in curd can also help us in **digestion**.

7. Why is airtight packaging a useful method for storing food in factories?

Answer:

1. Airtight packaging prevents outside air from easily reaching the food.
2. It also helps **keep microbes away from the food**.
3. Therefore, storing food in airtight cans and packages helps protect it from spoilage.

8. A child frequently suffers from indigestion because of poor eating habits. What advice would you give?

Answer:

1. The child should improve his or her **eating habits**, as bad eating habits can cause indigestion.
2. Curd or buttermilk contains good microbes that can support digestion.
3. If the problem becomes severe, the child should **consult a doctor** and take medicines as advised.

9. Why might buying locally grown seasonal fruits be a good choice?

Answer:

1. Fruits taste best when they are eaten in their **natural season**.
2. Locally grown fruits may be fresh because they do not have to travel far to reach us.
3. Thus, choosing local seasonal fruits can provide the freshness and enjoyment highlighted in the chapter.

10. A child tries to grind food using only the front teeth. Why would this be difficult?

Answer:

1. The front teeth or **incisors are mainly used for cutting** food.
2. **Premolars crush** food, while **molars grind** it.
3. Therefore, different types of teeth are needed to perform different functions while chewing.

11. What might happen if a person regularly swallows food without chewing it properly?

Answer:

1. The food will not be properly broken down into **smaller pieces**.
2. Proper chewing releases **saliva**, which helps in digestion.
3. Gulping food instead of chewing properly can also increase the danger of **choking**.

12. Your friend often talks and laughs with food in the mouth. What advice would you give and why?

Answer:

1. I would advise my friend to avoid **talking or laughing while food is in the mouth**.
2. The friend should take smaller mouthfuls and chew them properly before swallowing.
3. These habits help reduce the **risk of choking**.

13. Disha has a toothache and also eats many sweets. What three actions should she take?

Answer:

1. She should **rinse her mouth after eating and brush her teeth regularly**.
2. She should **eat fewer sweets** to maintain good oral hygiene.
3. She should visit a **dentist** for a dental check-up if her tooth is aching.

14. You are going on a two-day field trip. How would you select and protect the food you carry?

Answer:

1. I would choose foods that can remain safe for the required period and avoid items likely to spoil quickly.
2. I would use suitable preservation or storage methods such as **drying, airtight packaging, or keeping food cold**, depending on the food.
3. This would reduce favourable conditions for microbial growth and help keep the food from spoiling.

15. Imagine that no method of food preservation existed. What problems could arise?

Answer:

1. Many foods would **spoil quickly** when microbes get favourable conditions for growth.
2. People would find it difficult to keep seasonal or other foods safe for longer periods.
3. Long-term storage and availability of many food items would therefore become difficult.

3.11 Five-mark questions with Answers of LOTS Type: (8 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type:

1. Explain how microbes cause food spoilage and mention the conditions they need for growth.

Answer:

1. **Microbes** are tiny living things found in soil, water, air, plants, animals, and inside us.
2. They are so small that an instrument called a **microscope** is needed to see them individually.
3. Some microbes grow on food and change its **taste, smell, colour, and appearance**.
4. Microbes need **moisture, air, and the right temperature** to grow.
5. Removing one of these favourable conditions can help prevent or slow down food spoilage.

2. Describe different methods of food preservation discussed in the chapter.

Answer:

1. **Drying and dehydration** remove moisture from food and prevent microbes from growing easily.
2. **Pickling and oiling** keep air away from food and help stop microbial growth.
3. **Refrigeration and freezing** provide cold conditions that slow down microbes.
4. Traditional methods also use **salt, sugar, and spices such as pepper** to keep food from spoiling.
5. Food factories use **airtight cans and packaging** to keep microbes away from food.

3. Explain the importance of useful microbes in food and digestion.

Answer:

1. Not all microbes are harmful; some microbes are **useful to us**.
2. Some microbes help us in making **curd**.
3. Microbes present in the air help **idli batter rise**.
4. Curd contains good microbes that join the good microbes in our stomach.
5. These good microbes help us in the **digestion of food**.

4. Describe the different types of teeth and explain the importance of chewing food properly.

Answer:

1. **Incisors** are the teeth used for cutting food.
2. **Canines** help us tear food.
3. **Premolars** are used for crushing food, while **molars** are used for grinding it.
4. Proper chewing breaks food into **smaller pieces** before it is swallowed.
5. Chewing also releases **saliva**, which helps in digestion.

5. Explain how we can maintain good oral hygiene and avoid choking.

Answer:

1. We should **rinse our mouth after eating**.
2. We should **brush our teeth regularly** and eat fewer sweets.
3. If we have a toothache or need a dental check-up, we should visit a **dentist**.
4. We should take **smaller mouthfuls and chew food properly** before swallowing.
5. We should avoid **talking or laughing with food in our mouth** to reduce the risk of choking.

6. Explain what Disha learned about food preservation during her investigation.

Answer:

1. Disha learned that microbes need **moisture, air, and the right temperature** to grow.
2. She observed that drying food removes moisture and helps prevent microbial growth.
3. She learned that oil protects pickles by **keeping air away**.
4. She discovered that refrigeration provides cold conditions that **slow down microbes**.

5. She also learned that salt, sugar, spices, and airtight packaging are used to preserve food.

7. Describe what the chapter teaches about indigestion and healthy eating habits.

Answer:

1. **Bad eating habits** can sometimes lead to indigestion.
2. Curd and products such as **buttermilk** may be given for an upset stomach.
3. Curd contains good microbes that help in **digestion**.
4. If the problem becomes severe, a person should **consult a doctor and take medicines**.
5. The chapter encourages us to **eat right** as part of taking proper care of our food and health.

8. Write five important findings Disha made while solving “The Mystery of Food.”

Answer:

1. Microbes are found in **soil, water, air, plants, animals, and inside us**.
2. Drying removes moisture, and without moisture microbes cannot grow easily.
3. **Oil keeps air away**, while cold temperature slows down microbes.
4. Some microbes are useful because they help make foods and support **digestion**.
5. Proper chewing, good oral hygiene, correct food storage, and preservation are important for our well-being.

3.12 Five-mark questions with Answers of HOTS Type: (8 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. Riya finds that fresh chillies spoil quickly, while her grandmother’s dried chillies remain good for months. Analyse the reason.

Answer:

1. Fresh chillies contain **moisture**, which provides favourable conditions for microbes to grow.
2. Drying the chillies in the Sun removes much of their moisture.
3. Without sufficient moisture, microbes cannot grow easily.
4. Therefore, dried chillies can remain unspoiled for a much longer period than fresh chillies.
5. This shows that **drying or dehydration is an effective method of food preservation**.

2. A jar of mango pickle is prepared but no oil is added to it. Predict what may happen and explain the role of oil.

Answer:

1. The pickle may **spoil more quickly** when it is not properly protected from air.
2. Microbes require favourable conditions, including air and moisture, for their growth.
3. A layer of oil prevents **air from getting into the pickle**.
4. Keeping air away helps stop the growth of microbes and keeps the pickle safe.
5. Therefore, **oiling is an important preservation method** for pickles as described in the chapter.

3. Your family is going on a two-day field trip. How would you use your knowledge of food preservation to choose and store food?

Answer:

1. I would select foods that are **less likely to spoil quickly** during the journey.
2. Where suitable, I would choose dried or preserved foods because removing moisture helps prevent microbial growth.
3. Foods requiring low temperatures should be kept **cold**, because cold conditions slow down microbes.
4. I would keep suitable foods in **airtight packaging** to help keep microbes away.

- Thus, I would choose the preservation and storage method according to the type of food being carried.

4. A student says, “All microbes are harmful and should be removed from our food.” Evaluate this statement.

Answer:

- The statement is **incorrect because all microbes are not harmful**.
- Some microbes spoil food by changing its taste, smell, and appearance.
- Some useful microbes help in making foods such as **curd**.
- Microbes present in the air also help **idli batter rise**.
- Good microbes in curd can join the good microbes in our stomach and help in **digestion**.

5. Rahul eats very quickly without chewing properly and often talks while eating. Analyse the problems with these habits and suggest improvements.

Answer:

- Rahul should **eat slowly and chew his food properly** before swallowing.
- Proper chewing breaks food into smaller pieces and releases saliva that helps in digestion.
- Gulping food without chewing it properly can increase the danger of **choking**.
- He should take **smaller mouthfuls** while eating.
- He should also avoid **talking or laughing with food in his mouth** to reduce the risk of choking.

6. Two containers of milk are kept overnight—one inside a refrigerator and the other outside. Predict the difference and explain your reasoning.

Answer:

- The milk kept outside is likely to provide more favourable conditions for microbial growth than the refrigerated milk.
- Microbes require the **right temperature** along with other suitable conditions to grow.
- A refrigerator makes the temperature too cold for microbes to grow rapidly.
- Therefore, cold temperature **slows down microbial growth**.
- Hence, refrigeration is a useful method for keeping foods such as milk safe for a longer period.

7. A child often eats sweets, does not rinse the mouth after meals, and now has a toothache. What would you suggest?

Answer:

- The child should **rinse the mouth after eating**.
- The child should **brush the teeth regularly** to maintain oral hygiene.
- The child should reduce the consumption of **sweets**.
- Since the child already has a toothache, a **dentist should be consulted** for a check-up.
- Following these practices will help the child maintain better **oral hygiene**.

8. Imagine a world in which food cannot be preserved. What problems could people face?

Answer:

- Many foods would **spoil quickly** when microbes get suitable conditions for growth.
- Foods could not easily be stored for use over longer periods.
- People would have greater difficulty keeping seasonal foods available beyond their natural season.
- Transporting and storing foods that spoil quickly would become more difficult.
- Therefore, food preservation is important because it allows food to be **stored and used for longer durations**.

3.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Meera's family has harvested a large quantity of chillies and wants to store them for several months without using a refrigerator. What method should they use? Explain the process and reason.

Answer:

1. Meera's family should use the **sun-drying or dehydration method** to preserve the chillies.
2. They should spread the chillies properly and allow them to dry thoroughly in the Sun.
3. Sun-drying removes **moisture** from the chillies.
4. Without sufficient moisture, microbes cannot grow easily and spoil the chillies.
5. The dried chillies can therefore be stored for a longer period and later used for making chilli powder.

2. Your mother has prepared a jar of green mango pickle. How would you help her preserve it using the method described in the chapter?

Answer:

1. I would make sure that the mango pickle is properly covered with **oil**.
2. The layer of oil helps prevent air from getting into the pickle.
3. Microbes need favourable conditions such as **air, moisture, and the right temperature** to grow.
4. Keeping air away helps stop microbial growth in the pickle.
5. Therefore, using oil helps keep the mango pickle safe for a longer time.

3. Your family buys milk, vegetables, butter and cake for use over the next few days. How would you store these foods and why?

Answer:

1. I would store the **milk, vegetables, butter, and cake in the refrigerator**.
2. A refrigerator maintains a low temperature.
3. Cold temperature makes conditions less favourable for microbes to grow quickly.
4. Therefore, refrigeration **slows down microbial growth**.
5. This helps these food items remain usable for a longer period than if they were left outside.

4. During lunch, your friend takes large mouthfuls, eats very fast, and talks while chewing. What advice would you give your friend?

Answer:

1. I would advise my friend to take **smaller mouthfuls** of food.
2. My friend should chew each mouthful properly before swallowing it.
3. Proper chewing breaks food into smaller pieces and releases **saliva**, which helps digestion.
4. My friend should avoid **talking or laughing with food in the mouth**.
5. Following these habits will help reduce the risk of **choking**.

5. A child frequently eats sweets, does not rinse the mouth after meals, and complains of toothache. Apply what you learned from the chapter to suggest suitable actions.

Answer:

1. The child should **rinse the mouth after eating**.
2. The child should **brush the teeth regularly** to maintain oral hygiene.
3. The child should reduce the amount of **sweets** eaten.
4. Since the child has a toothache, the child should visit a **dentist for a check-up**.
5. Following these practices will help the child take better care of the teeth and mouth.

6. You are asked to plan food for a two-day school field trip. How would you use your knowledge of food preservation while selecting and storing the food?

Answer:

1. I would choose foods that can remain safe for the required period and are not likely to spoil quickly.
 2. Where suitable, I would choose **dried or dehydrated foods**, because removing moisture reduces microbial growth.
 3. Foods that need low temperatures should be kept **cold** whenever suitable storage is available.
 4. I would keep suitable food in **airtight containers or packages** to help keep microbes away.
 5. I would check the food before eating and avoid food showing signs of spoilage.
- 7. You find an uttapam that was forgotten for three days and now has a foul smell and coloured patches. What should you conclude from your observations?**

Answer:

1. I would conclude that the uttapam has undergone **food spoilage**.
 2. The coloured patches may be **mould**, which is made up of colonies of microbes.
 3. Microbes are tiny living things that can grow on food under suitable conditions.
 4. Their growth can cause noticeable changes such as an unpleasant smell and coloured patches.
 5. Therefore, I would recognise the uttapam as spoiled rather than treating it as fresh food.
- 8. Your younger brother says that all microbes are bad and asks why people eat curd. How would you explain the usefulness of microbes to him?**

Answer:

1. I would explain that **not all microbes are harmful**.
 2. Some useful microbes help us in making **curd**.
 3. Microbes present in the air also help **idli batter rise**.
 4. The microbes in curd can join the good microbes in our stomach and help in digestion.
 5. Therefore, microbes can be both harmful and useful depending on their role.
- 9. While eating an apple and other foods, you notice that different teeth perform different actions. Explain how you would use your teeth while eating.**

Answer:

1. I would use my **incisors** to cut or bite pieces of food.
 2. I would use my **canines** when food needs to be torn.
 3. My **premolars** would help crush the food into smaller pieces.
 4. My **molars** would help grind the food thoroughly.
 5. I would chew the food properly so that it mixes with saliva and becomes easier to digest.
- 10. You are helping your family buy fruits from a local market. How would you apply Disha's learning while choosing fruits?**

Answer:

1. I would **examine the fruits carefully** before buying them.
2. I would prefer fruits that are available in their **natural season**.
3. Seasonal fruits taste best when eaten at the appropriate time of the year.
4. I would also consider **locally grown fruits**, which may be fresh because they have not travelled far.
5. Thus, I would use freshness, season, and local availability while selecting fruits.

3.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. Disha notices coloured patches on food left for several days. What is the most likely explanation?

- A) The food has become sweeter

- B) Mould has grown on the food
- C) The food has lost all its water
- D) The food has become colder

Answer: B) Mould has grown on the food

2. Which combination provides favourable conditions for the growth of microbes?

- A) Moisture + air + suitable temperature
- B) Dryness + no air + cold temperature
- C) Sunlight + dryness + no air
- D) Salt + oil + cold temperature

Answer: A) Moisture + air + suitable temperature

3. Four pieces of the same food are stored differently. In which condition would microbial growth most likely be slowed?

- A) Warm, moist and open
- B) Moist and kept at a suitable temperature
- C) Refrigerated at a cold temperature
- D) Warm and exposed to air

Answer: C) Refrigerated at a cold temperature

4. Sun-drying helps preserve chillies mainly because it:

- A) adds air to the chillies
- B) removes moisture from the chillies
- C) increases microbial growth
- D) makes microbes larger

Answer: B) Removes moisture from the chillies

5. Which observation best demonstrates the effect of oil in food preservation?

- A) Bread develops coloured patches
- B) Milk remains cold in a refrigerator
- C) Mango pickle covered with oil remains protected from air
- D) Idli batter rises

Answer: C) Mango pickle covered with oil remains protected from air

6. Why does a layer of oil help preserve pickle?

- A) It increases moisture
- B) It keeps air away from the food
- C) It makes microbes grow faster
- D) It increases the temperature

Answer: B) It keeps air away from the food

7. Which preservation method mainly works by lowering the temperature?

- A) Sun-drying
- B) Oiling
- C) Refrigeration
- D) Airtight packing

Answer: C) Refrigeration

8. Which of the following is NOT mentioned in the chapter as a traditional substance used to keep food from spoiling?

- A) Salt
- B) Sugar
- C) Pepper
- D) Soap

Answer: D) Soap

9. What happens to water when butter is heated to prepare ghee?

- A) It freezes

- B) It evaporates
- C) It turns into oil
- D) It remains unchanged

Answer: B) It evaporates

10. Food factories often use airtight cans and packaging mainly to:

- A) increase moisture
- B) keep microbes away
- C) make food warmer
- D) allow more air inside

Answer: B) Keep microbes away

11. Which statement about microbes is correct?

- A) All microbes spoil food
- B) All microbes are visible to our eyes
- C) Some microbes are useful while others can spoil food
- D) Microbes are found only in water

Answer: C) Some microbes are useful while others can spoil food

12. Microbes can be found in:

- A) only soil and water
- B) only plants and animals
- C) only the human body
- D) soil, water, air, plants, animals and inside us

Answer: D) Soil, water, air, plants, animals and inside us

13. Which instrument is needed to see individual microbes?

- A) Telescope
- B) Microscope
- C) Periscope
- D) Magnifying mirror

Answer: B) Microscope

14. If idli batter does not rise properly, which useful activity discussed in the chapter may not have occurred sufficiently?

- A) Action of microbes in the air
- B) Grinding by molars
- C) Refrigeration
- D) Sun-drying

Answer: A) Action of microbes in the air

15. Why can curd or buttermilk be helpful for digestion according to the chapter?

- A) They contain no microbes
- B) They destroy all stomach microbes
- C) Their good microbes can join the good microbes in the stomach
- D) They stop saliva production

Answer: C) Their good microbes can join the good microbes in the stomach

16. Which sequence correctly matches the types of teeth with their functions?

- A) Incisors—tear; canines—grind; premolars—cut; molars—crush
- B) Incisors—cut; canines—tear; premolars—crush; molars—grind
- C) Incisors—grind; canines—cut; premolars—tear; molars—crush
- D) Incisors—crush; canines—cut; premolars—grind; molars—tear

Answer: B) Incisors—cut; canines—tear; premolars—crush; molars—grind

17. A child needs to grind a mouthful of food thoroughly. Which teeth are mainly responsible?

- A) Incisors

- B) Canines
- C) Molars
- D) Front incisors only

Answer: C) Molars

18. Proper chewing supports digestion because it:

- A) removes all microbes from food
- B) breaks food into smaller pieces and releases saliva
- C) prevents the production of saliva
- D) makes food completely dry

Answer: B) Breaks food into smaller pieces and releases saliva

19. Which behaviour is most likely to increase the risk of choking?

- A) Taking small mouthfuls
- B) Chewing properly
- C) Talking and laughing with food in the mouth
- D) Eating slowly

Answer: C) Talking and laughing with food in the mouth

20. Which set contains only good oral-hygiene practices mentioned by the dentist?

- A) Eat more sweets, brush occasionally, gulp food
- B) Rinse after eating, brush regularly, eat fewer sweets
- C) Avoid brushing, eat quickly, drink more juice
- D) Brush only when there is toothache, eat more sweets

Answer: B) Rinse after eating, brush regularly, eat fewer sweets

21. A hole formed in a tooth is called a:

- A) mould
- B) cavity
- C) microbe
- D) molar

Answer: B) Cavity

22. Which pair is correctly matched?

- A) Dehydration — adding moisture
- B) Refrigeration — slowing microbial growth through cold temperature
- C) Oiling — allowing more air into food
- D) Airtight packaging — increasing microbial contact

Answer: B) Refrigeration — slowing microbial growth through cold temperature

23. Consider the following statements:

- I. Some microbes spoil food.
- II. Some microbes help in making food.
- III. Some microbes help in digestion.

Which option is correct?

- A) I only
- B) I and II only
- C) II and III only
- D) I, II and III

Answer: D) I, II and III

24. A student wants to preserve tomatoes by removing one condition needed for microbial growth. Which activity from the chapter would be most suitable?

- A) Keeping tomato slices in sunlight
- B) Keeping them in a warm, moist place
- C) Sprinkling them with water

D) Leaving them uncovered in a humid place

Answer: A) Keeping tomato slices in sunlight

25. Which pair of preservation methods acts mainly by removing or blocking different requirements of microbes?

A) Sun-drying removes moisture; oiling keeps air away

B) Sun-drying adds moisture; oiling increases air

C) Refrigeration adds heat; drying adds water

D) Oiling lowers temperature; refrigeration removes air

Answer: A) Sun-drying removes moisture; oiling keeps air away

26. Disha sees two mangoes of similar quality—one locally grown and one transported from far away. According to the chapter, why might she prefer the local mango?

A) Local mangoes never contain microbes

B) It may be fresher because it has not travelled far

C) Local mangoes do not require chewing

D) It will always remain fresh throughout the year

Answer: B) It may be fresher because it has not travelled far

27. Which fruit-season pair is mentioned in the chapter?

A) Amla–winter and jamun–summer

B) Amla–summer and jamun–winter

C) Both only in winter

D) Both only in summer

Answer: A) Amla–winter and jamun–summer

28. A child has severe digestive trouble that does not improve. What action is most appropriate according to the chapter?

A) Eat more sweets

B) Avoid all food permanently

C) Consult a doctor and take medicines as advised

D) Eat without chewing

Answer: C) Consult a doctor and take medicines as advised

29. Which preservation principle is common to both refrigeration and sun-drying?

A) Both make conditions less favourable for microbial growth

B) Both add air to food

C) Both increase moisture

D) Both depend on adding oil

Answer: A) Both make conditions less favourable for microbial growth

30. Which statement best summarizes the central learning of “The Mystery of Food”?

A) Every microbe should be considered harmful

B) Food preservation is unnecessary if food looks fresh

C) Understanding microbes, proper preservation, healthy eating, chewing and hygiene helps us care for our food and health

D) Only refrigerated food is safe to eat

Answer: C) Understanding microbes, proper preservation, healthy eating, chewing and hygiene helps us care for our food and health

3.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities for Teaching:

(1) Activity-Based Learning – Observe Food Spoilage:

Let students observe safe examples or teacher-prepared images of bread/food showing mould over time. Ask them to record changes in **colour, appearance, and smell**

without touching or tasting spoiled food. Connect their observations to the chapter's explanation of microbes and mould.

(2) Hands-on Demonstration of Sun-Drying:

Conduct the chapter activity using **tomato slices or another suitable food item** placed in sunlight. Students can maintain a simple observation record showing how the food changes as moisture is removed. Use the activity to reinforce the principle that **dehydration helps prevent microbial growth**.

(3) Compare Different Preservation Methods:

Create a classroom chart with headings such as **Drying, Oiling, Refrigeration, Traditional Preservation, and Airtight Packaging**. Students can classify familiar foods under the appropriate method. This strengthens the connection between preservation methods and the conditions required for microbial growth.

(4) Connect Learning with Traditional Knowledge:

Encourage students to ask parents or grandparents how foods such as **pickles, chillies, ghee, or other family foods** are traditionally prepared and stored. Students can share their findings in class. This supports the chapter's emphasis on traditional food practices passed from one generation to another.

(5) Learning Through the "Detective Disha" Approach:

Present students with simple food-related mysteries such as, "Why did this bread spoil?" or "Why does pickle have oil on top?" Let them collect clues, discuss possible reasons, and arrive at conclusions like Disha. This keeps the chapter's **investigative and discovery-based approach** central to learning.

(6) Good Microbes vs. Food-Spoiling Microbes:

Ask students to prepare a two-column organizer titled **"Helpful Microbes" and "Food-Spoiling Microbes."** Include examples from the chapter such as microbes helping in **curd making, idli batter rising, digestion, and mould formation**. This prevents the misconception that all microbes are harmful.

(7) Teeth and Chewing Demonstration:

Use a diagram/model of teeth to help students identify **incisors, canines, premolars, and molars** and relate each to cutting, tearing, crushing, and grinding. Follow it with a discussion on how proper chewing breaks food into smaller pieces and mixes it with saliva.

(8) Practise Oral Hygiene and Safe Eating Habits:

Reinforce practical habits such as **rinsing after eating, brushing regularly, eating fewer sweets, taking smaller mouthfuls, and chewing properly**. Role-play "right and wrong eating habits" to make these behaviours memorable.

(9) Seasonal and Local Food Calendar:

Ask students to create a simple **seasonal-fruit calendar** using examples from the chapter such as amla in winter and jamun in summer. Discuss why seasonal fruits are enjoyable and why locally grown fruits may be fresher because they travel a shorter distance.

(10) Exit Ticket for Concept Reinforcement:

At the end of the lesson, ask every student to write three short responses: **one condition microbes need, one method of food preservation, and one healthy eating/oral-hygiene practice**. This provides a quick formative assessment of the chapter's major learning outcomes.

3.16 Innovations Opportunity List from the Chapter: (10 Ideas)

"Innovations" Opportunities in Teaching–Learning for 5th Standard:

- (1) **Young Food Detective Challenge:**
Turn the classroom into a “Food Investigation Lab” where students become **young detectives like Disha**. Give them situations such as bread developing coloured patches, pickle remaining good under oil, or chillies lasting after drying, and ask them to identify the scientific reason. This transforms the chapter into an inquiry-based learning experience.
- (2) **Microbe Growth Condition Game:**
Create three large cards labelled **Moisture, Air, and Right Temperature**. Students can predict what happens when one of these conditions is removed and connect their answers with drying, oiling, and refrigeration. This gamifies the chapter’s central idea that microbes need suitable conditions for growth.
- (3) **Food Preservation Innovation Station:**
Set up learning stations for **sun-drying, oiling/pickling, refrigeration, traditional preservation, and airtight packaging**. Small groups rotate through the stations, match foods with preservation methods, and explain how each method helps prevent spoilage.
- (4) **Time-Lapse Observation Project:**
Students can observe teacher-supervised tomato slices kept in sunlight and record their changes through **drawings or photographs over several days**. The observations can be combined into a simple classroom time-lapse or “Before–During–After” display. This makes the process of dehydration visually understandable.
- (5) **Good Microbes Superhero Cards:**
Students can design “Microbe Superhero” cards showing useful roles of microbes, such as **helping make curd, making idli batter rise, and supporting digestion**. Another set can represent microbes responsible for food spoilage. This creative activity helps children understand that **not all microbes are harmful**.
- (6) **Grandparents’ Food Wisdom Digital Wall:**
Students can interview parents or grandparents about traditional ways of preparing and storing foods. Their findings can be presented through drawings, short audio clips, photographs, or classroom posters to create a “**Traditional Food Wisdom Wall**.” This connects classroom learning with food practices passed from generation to generation.
- (7) **Build-a-Mouth Interactive Model:**
Let groups create a simple mouth model using cardboard or clay and label **incisors, canines, premolars, and molars**. Students can demonstrate which teeth cut, tear, crush, and grind different foods. This provides a hands-on way to learn the functions of different teeth.
- (8) **“Chew It Right” Role-Play:**
Students can perform short role-plays showing correct and incorrect eating habits, such as **gulping food, taking large mouthfuls, talking while eating, and chewing properly**. Classmates identify the unsafe behaviour and suggest corrections. This makes the chapter’s choking-prevention message practical and memorable.
- (9) **Seasonal Food Wheel:**
Students can create a rotating “**What’s in Season?**” **food wheel** showing fruits available in different seasons, including examples such as **amla in winter and jamun in summer**. They can also mark locally available fruits and discuss freshness and seasonal eating.
- (10) **Design a Smart Food-Storage Poster:**
Give students a design challenge: “**How can we stop food from spoiling?**” They can create posters or mini concept maps linking **moisture → drying, air → oiling/airtight storage, and temperature → refrigeration**. This encourages students to apply the chapter concepts instead of merely memorising preservation methods.

3.17: Practicing Questions/Question Bank:**A. Fill in the Blanks:**

1. Tiny living things that cannot be seen individually with our eyes are called _____.
Answer: Microbes
2. An instrument used to see microbes is called a _____.
Answer: Microscope
3. Microbes need moisture, air, and the right _____ to grow.
Answer: Temperature
4. Removing moisture from food by drying is called _____.
Answer: Dehydration
5. A layer of _____ keeps air away from pickle.
Answer: Oil
6. Cold temperature _____ the growth of microbes.
Answer: Slows down
7. Salt, sugar, and _____ such as pepper have traditionally been used to preserve food.
Answer: Spices
8. Microbes in the air help _____ batter to rise.
Answer: Idli
9. _____ are the teeth used for cutting food.
Answer: Incisors
10. _____ are mainly used for grinding food.
Answer: Molars
11. Proper chewing releases _____, which helps in digestion.
Answer: Saliva
12. A hole in a tooth is called a _____.
Answer: Cavity
13. We should eat slowly to avoid _____.
Answer: Choking
14. Amla is available in _____.
Answer: Winter
15. Jamun is available in _____.
Answer: Summer

B. One-Mark Descriptive Questions:

1. **What are microbes?**
Answer: Microbes are tiny living things that are too small to be seen individually with our eyes.

2. **Name the instrument used to see microbes.**
Answer: A microscope is used to see microbes.
3. **Where are microbes found?**
Answer: Microbes are found in soil, water, air, plants, animals, and inside us.
4. **What is mould?**
Answer: Mould is a colony made up of thousands of microbes.
5. **Name the three conditions required for microbial growth.**
Answer: Microbes need moisture, air, and the right temperature to grow.
6. **Why are chillies dried in the Sun?**
Answer: Chillies are dried to remove moisture and help preserve them.
7. **How does oil help preserve pickle?**
Answer: Oil keeps air away and helps stop microbial growth.
8. **How does refrigeration preserve food?**
Answer: Refrigeration provides a cold temperature that slows down microbes.
9. **Give one useful role of microbes.**
Answer: Some microbes help us make curd.
10. **Which teeth are used for tearing food?**
Answer: Canines are used for tearing food.
11. **Which teeth grind food?**
Answer: Molars grind food.
12. **Why should food be chewed properly?**
Answer: Proper chewing breaks food into smaller pieces and releases saliva that helps digestion.
13. **What is a cavity?**
Answer: A cavity is a hole in a tooth.
14. **Whom should we visit when we have a toothache?**
Answer: We should visit a dentist.
15. **Why should we avoid talking while eating?**
Answer: We should avoid talking with food in our mouth to reduce the risk of choking.

C. Two-Mark Descriptive Questions:

1. **What conditions help microbes grow?**
Answer:
 1. Microbes need **moisture and air**.
 2. They also need the **right temperature** for growth.
2. **How does sun-drying preserve food?**
Answer:
 1. Sun-drying removes **moisture** from food.

2. Without moisture, microbes cannot grow easily.
3. **How does oil preserve pickle?**
Answer:
 1. Oil forms a layer over the pickle and **keeps air away**.
 2. This helps stop microbial growth.
4. **Why is a refrigerator useful for food preservation?**
Answer:
 1. A refrigerator keeps food at a **cold temperature**.
 2. Cold temperature slows down microbial growth.
5. **Mention two useful roles of microbes.**
Answer:
 1. Some microbes help in making **curd and raising idli batter**.
 2. Good microbes also help in **digestion**.
6. **What are the functions of incisors and canines?**
Answer:
 1. Incisors are used for **cutting food**.
 2. Canines are used for **tearing food**.
7. **What are the functions of premolars and molars?**
Answer:
 1. Premolars help **crush food**.
 2. Molars help **grind food**.
8. **How does chewing help digestion?**
Answer:
 1. Chewing breaks food into **smaller pieces**.
 2. It releases **saliva**, which helps digestion.
9. **Mention two ways to maintain oral hygiene.**
Answer:
 1. We should rinse our mouth after eating and **brush regularly**.
 2. We should **eat fewer sweets**.
10. **Mention two precautions to avoid choking.**
Answer:
 1. We should take smaller mouthfuls and **chew properly**.
 2. We should avoid talking or laughing with food in our mouth.

D. Three-Mark Descriptive Questions:

1. **Explain how microbes cause food spoilage.**

Answer:

1. Some microbes grow on food when suitable conditions are available.
2. They can cause changes in the **smell, colour, and appearance** of food.
3. Mould appearing as coloured patches is an example of microbial growth.

2. **Explain the sun-drying method of food preservation.**

Answer:

1. Food such as chillies can be dried in the Sun.
2. Sun-drying removes **moisture** from the food.
3. Without sufficient moisture, microbes cannot grow easily.

3. **Explain three ways in which food can be preserved.**

Answer:

1. **Drying** removes moisture from food.
2. **Oiling** keeps air away from food.
3. **Refrigeration** slows microbial growth through cold temperature.

4. **Explain three useful roles of microbes.**

Answer:

1. Some microbes help in making **curd**.
2. Microbes in the air help **idli batter rise**.
3. Good microbes also help us **digest food**.

5. **Describe the functions of different types of teeth.**

Answer:

1. Incisors cut and canines tear food.
2. Premolars crush food.
3. Molars grind food.

6. **Why is proper chewing important?**

Answer:

1. Chewing breaks food into smaller pieces.
2. It releases saliva, which helps in digestion.
3. Eating slowly and chewing properly also helps avoid choking.

7. **What advice did the dentist give for healthy teeth?**

Answer:

1. Rinse the mouth after eating.
2. Brush the teeth regularly.
3. Eat fewer sweets.

8. **Why should we prefer seasonal and locally available fruits?**

Answer:

1. Fruits taste best when eaten in their **season**.
2. Local fruits can be fresher because they do not travel far.
3. Seasonal eating also allows us to enjoy different fruits at their appropriate times.

E. Five-Mark Descriptive Questions:

1. **Describe five methods or approaches to food preservation discussed in the chapter.**

Answer:

1. **Sun-drying** removes moisture and reduces microbial growth.
2. **Oiling** keeps air away from foods such as pickle.
3. **Refrigeration** slows microbial growth through cold temperature.
4. Traditional preservation uses substances such as **salt, sugar, and spices**.
5. Food factories use **airtight cans and packaging** to keep microbes away.

2. **Explain what you have learned about harmful and useful microbes.**

Answer:

1. Microbes are tiny living things found almost everywhere.
2. Some microbes grow on food and cause **food spoilage**.
3. Some useful microbes help in making **curd**.
4. Microbes in the air help **idli batter rise**.
5. Good microbes can also help us in **digestion**.

3. **Explain the different types of teeth and the importance of proper chewing.**

Answer:

1. Incisors are used for **cutting food**.
2. Canines are used for **tearing food**.
3. Premolars crush food, while molars grind it.
4. Proper chewing breaks food into smaller pieces and releases **saliva**.
5. Saliva helps digestion, while careful chewing also helps reduce the risk of choking.

4. **Describe five healthy practices related to eating and oral hygiene.**

Answer:

1. Take **smaller mouthfuls** while eating.
2. Chew food properly before swallowing.
3. Avoid talking or laughing with food in the mouth.
4. Rinse the mouth after eating and **brush regularly**.

5. Eat fewer sweets and visit a dentist when necessary.

5. **Imagine you are going on a school field trip. Explain how you would keep your food safe and eat it properly.**

Answer:

1. I would select food that can remain safe for the required period.
2. I would use suitable preserved foods or keep foods cold where refrigeration is available.
3. I would keep suitable foods in **airtight containers or packages**.
4. I would check the food for signs of spoilage before eating it.
5. I would take small mouthfuls, chew properly, and avoid talking with food in my mouth.



5th Standard World Around Us Book Chapter 4

Chapter 4: Our School – A Happy Place

4.1 Summary of the Chapter:

Summary of Chapter 4: Our School—A Happy Place:

- (1) **School as a Happy and Safe Place:** A school should be a place where children feel **safe, cared for and happy**, while learning new things, playing and spending time with friends.
- (2) **Making Our School Green:** A **green school** manages waste properly, saves water, uses electricity carefully, plants more trees and takes care of the environment. Students can actively contribute towards making their school greener.
- (3) **Students as School Explorers:** Students can form teams such as **Water Watchers, Electricity Savers, Waste Warriors, Green Guardians and Traffic Trackers** to observe different areas of the school and identify opportunities for improvement.
- (4) **Proper Waste Management:** Waste can be reduced by **using only what we need, reusing useful materials and separating wet and dry waste**. Recyclable materials should be given to recyclers so that they can be reused or recycled.
- (5) **Keeping the School Cool:** **Trees, shade, natural ventilation and suitable roof colours** help keep buildings cool. White surfaces reflect the Sun's heat, while black surfaces absorb more heat.
- (6) **Saving Water:** Water is a **precious resource** and should be used carefully. Even a dripping tap can waste a large amount of water over time, so leaks should be repaired and rainwater can be collected and used wisely.
- (7) **Importance of Greenery:** Trees and plants **keep the air clean, provide shade and food for birds and insects, and help keep the surroundings cool**. Schools can plant more trees and even create butterfly gardens.
- (8) **Road and Traffic Safety:** Everyone should **know and follow traffic rules** to prevent accidents. Students can observe traffic near the school gate and create signboards to encourage drivers, parents and students to behave safely.
- (9) **Fire Safety and Preparedness:** Students should know the location of **fire extinguishers, emergency exits and assembly points**. During a fire, they should remain calm, move safely to the nearest exit and gather at the designated assembly point.
- (10) **Good Behaviour Makes a Happy School:** **Respect, kindness, cleanliness, cooperation and helping others** make school and public places peaceful and welcoming. Every student can contribute through small responsible actions such as saving water, switching off lights, keeping the surroundings clean and treating others kindly.

4.2 Important Formulas:

Important Formulas / Calculations Related to Chapter 4: Our School—A Happy Place:

This chapter is mainly **activity- and concept-based**, so it does **not contain formal scientific formulas**. However, a few simple mathematical relationships can be used to solve quantitative problems arising from the activities, especially those involving **water wastage and temperature**.

1. Number of glasses of water wasted:

Number of glasses = Total time ÷ Time taken to fill one glass

The chapter asks students to measure how long a dripping tap takes to fill one glass and then estimate how many glasses could fill in one day.

2. Water wasted in a given time:

Water wasted = Number of glasses filled × Capacity of one glass

Example: If 20 glasses of 250 mL each are filled,

Water wasted = $20 \times 250 = 5,000 \text{ mL} = 5 \text{ L}$

3. Water wasted per day:

Water wasted per day = Rate of water leakage × Time

This is useful for understanding the chapter's point that even a small dripping tap can waste a large amount of water over time.

4. Time conversion for water-wastage problems:

1 minute = 60 seconds

1 hour = 60 minutes

1 day = 24 hours = 1,440 minutes = 86,400 seconds

5. Capacity conversion

1 litre (L) = 1,000 millilitres (mL)

1,000 mL = 1 L

6. Change in Temperature:

Temperature change = Final temperature – Initial temperature

The chapter asks students to measure the temperature of water kept **under a tree and under the Sun**, first at the start and again after one hour.

7. Difference between two temperature readings:

Temperature difference = Higher temperature – Lower temperature

This can be used to compare water kept under the Sun with water kept under a tree.

8. Average Temperature (if several readings are taken):

Average temperature = Sum of all temperature readings ÷ Number of readings

9. Waste Segregation Count:

Total waste items = Wet waste items + Dry waste items + Items for recycling

The chapter's segregation activity uses three categories—**wet waste, dry waste and items for recyclers**.

10. Percentage of a type of waste (for enrichment/application questions):

Percentage of waste type = $(\text{Number of items of that type} \div \text{Total number of waste items}) \times 100$

Most Important for This Chapter

For **4th-standard students**, the most relevant quantitative relationships are:

Number of glasses wasted = Total time ÷ Time to fill one glass

Total water wasted = Number of glasses × Capacity of one glass

Temperature change = Final temperature – Initial temperature

These directly support the chapter's practical activities on **saving water and comparing temperatures**; advanced formulas are **not required by the uploaded chapter**.

4.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)**LOTS Type – Fill in the Blanks with Answers**

1. A school where we manage waste, save water and use electricity carefully is called a _____.

Answer: green school

2. A green school makes its campus greener by planting more _____.

Answer: trees

3. The _____ team checks whether water is being wasted in the school.

Answer: Water Watchers

4. The _____ team observes whether lights and fans are left on unnecessarily.

Answer: Electricity Savers

5. The _____ team looks after trees and plants in the school.
Answer: Green Guardians
6. The _____ team observes litter and the use of dustbins around the school.
Answer: Waste Warriors
7. The _____ team observes road safety conditions near the school gate.
Answer: Traffic Trackers
8. Waste should be separated into _____ and dry categories.
Answer: wet
9. Old newspapers and other useful materials can be given to _____.
Answer: recyclers
10. In the segregation game, the _____ box is used for wet waste.
Answer: green
11. In the segregation game, the _____ box is used for dry waste.
Answer: blue
12. A white roof reflects the Sun's _____.
Answer: heat
13. A black surface _____ heat.
Answer: absorbs
14. Water is described in the chapter as a precious _____.
Answer: treasure
15. Even a small _____ can waste a lot of water over time.
Answer: leak
16. The _____ **Abhiyan** is a campaign to save and protect water.
Answer: Jal Shakti
17. Jal Shakti Abhiyan encourages people to catch _____.
Answer: rainwater
18. Trees help keep the _____ clean.
Answer: air
19. Trees provide _____ and food to birds and insects.
Answer: shade
20. Students can create a _____ **garden** in their school to attract butterflies.
Answer: butterfly
21. Many road accidents happen because people do not follow _____ **rules** correctly.
Answer: traffic
22. Students can design a _____ for the school gate to give a clear safety message.
Answer: signboard
23. In case of a fire, students should move quickly and _____ to the nearest exit route.
Answer: calmly
24. During a fire, we should crawl _____ under smoke.
Answer: low
25. After leaving the building during a fire, students should go to the _____ **point**.
Answer: assembly
26. Students should not _____ in closets or bathrooms during a fire.
Answer: hide
27. Our behaviour can make places peaceful and _____.
Answer: welcoming
28. We show respect and kindness by waiting for our _____.
Answer: turn

29. Using _____ words is one way of showing respect and kindness.

Answer: kind

30. When we are kind and _____, everyone feels happy.

Answer: polite

4.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)

HOTS Type – Fill in the Blanks with Answers:

1. If students notice that lights and fans are running in an empty classroom, they should _____ them to save electricity.

Answer: switch off

2. If a tap continues to drip after use, the best action is to _____ the leak so that water is not wasted.

Answer: fix

3. If a classroom becomes very hot during the day, planting _____ near it can provide shade and help keep it cool.

Answer: trees

4. A school planning to reduce heat from its roof should preferably paint the roof _____ because it reflects the Sun's heat.

Answer: white

5. If two tiles, one black and one white, are kept under the Sun, the _____ tile is expected to feel cooler.

Answer: white

6. If students find food peels mixed with paper and other dry waste, the waste has not been properly _____.

Answer: separated

7. If students want to make the work of sanitation workers easier and safer, they should _____ waste before throwing it away.

Answer: separate

8. If an old newspaper can be reused or recycled, it should be given to a _____ rather than thrown away.

Answer: recycler

9. If a school has many plants but very few butterflies, students can create a _____ garden using suitable plants.

Answer: butterfly

10. If one glass of water kept under a tree and another under the Sun are compared after an hour, the water under the _____ is likely to be cooler.

Answer: tree

11. If students observe water collecting around the school, they should report it because such wet places could become breeding grounds for _____.

Answer: mosquitoes

12. If vehicles are speeding near the school entrance, the Traffic Trackers should suggest measures to improve _____ near the school.

Answer: safety

13. If drivers near the school are not following traffic rules, students can design a _____ carrying a clear safety message.

Answer: signboard

14. If road users carefully follow traffic rules, the risk of road _____ can be reduced.

Answer: accidents

15. During a fire, if there is smoke in a room, a student should crawl _____ to breathe cleaner air.
Answer: low
16. A student who has safely left a building during a fire should never _____ to the building.
Answer: return
17. After safely leaving the building during a fire drill, students should gather at the _____ point.
Answer: assembly
18. If a student notices that someone is missing after reaching the assembly point, the student should immediately inform the _____ or teachers.
Answer: staff
19. If a child throws a wrapper in the playground, other students should encourage the child to keep the surroundings _____.
Answer: clean
20. If two students are pushing and skipping a queue at the water tap, they should be encouraged to wait for their _____.
Answer: turn
21. If a student is repeatedly making fun of another child, using _____ words instead would help create a happier school environment.
Answer: kind
22. When students respect, help and behave politely with one another, the school becomes more peaceful and _____.
Answer: welcoming
23. If a school wants to conserve water during the rainy season, it can collect and use _____.
Answer: rainwater
24. A dripping tap that appears to waste only a little water can actually waste a _____ amount over a long period.
Answer: large
25. If students want their school to become greener, safer and happier, they should actively participate in solving school and _____ problems.
Answer: community
26. If students find that there are not enough dustbins in the school, adding more dustbins can help improve _____ management.
Answer: waste
27. If birds and butterflies regularly visit an area of the school, it indicates that the area has suitable _____ and trees for them.
Answer: plants
28. A school with clean surroundings, careful water use, proper waste management and more trees can be described as a _____ school.
Answer: green
29. If a younger child copies another student who throws litter, it shows that our _____ can influence others.
Answer: behaviour
30. Saving water, managing waste, caring for plants and treating people kindly can together make school a _____ place.
Answer: happy

4.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type

1. **What is a green school?**
Answer: A green school manages waste, saves water, uses electricity carefully, and plants and cares for trees.
2. **Why do children consider school a happy place?**
Answer: Children consider school a happy place because they meet friends, play games and learn new things there.
3. **Name any two School Explorer Teams.**
Answer: Water Watchers and Electricity Savers are two School Explorer Teams.
4. **What is the role of Water Watchers?**
Answer: Water Watchers observe leaking taps, water wastage, water tanks and wet places in the school.
5. **What is the role of Electricity Savers?**
Answer: Electricity Savers check whether lights and fans are unnecessarily switched on and whether natural light is used.
6. **What is the role of Green Guardians?**
Answer: Green Guardians observe and care for the trees, plants and greenery in the school.
7. **What is the role of Traffic Trackers?**
Answer: Traffic Trackers observe traffic and road-safety conditions around the school gate.
8. **What is the role of Waste Warriors?**
Answer: Waste Warriors observe litter, dustbins and waste segregation around the school.
9. **How can we reduce waste?**
Answer: We can reduce waste by using only what we need, reusing things and not throwing away useful items.
10. **Into which two main categories should waste be separated?**
Answer: Waste should be separated into wet waste and dry waste.
11. **What should be done with old newspapers?**
Answer: Old newspapers should be kept separately and given to recyclers.
12. **Which colour box is used for wet waste in the segregation activity?**
Answer: A green box is used for wet waste.
13. **Which colour box is used for dry waste in the segregation activity?**
Answer: A blue box is used for dry waste.
14. **How do trees help to keep classrooms cool?**
Answer: Trees provide shade and help keep the surroundings and classrooms cool.
15. **Why does a white roof remain cooler?**
Answer: A white roof remains cooler because it reflects the Sun's heat.
16. **What happens to a black surface in sunlight?**
Answer: A black surface absorbs heat from sunlight.
17. **Why should dripping taps be repaired?**
Answer: Dripping taps should be repaired because even a small leak can waste a lot of water over time.
18. **What is Jal Shakti Abhiyan?**
Answer: Jal Shakti Abhiyan is a campaign that encourages people to save and protect water.
19. **Mention one way of saving water mentioned in the chapter.**
Answer: Collecting rainwater is one way of saving water.

20. How do trees help living beings?

Answer: Trees provide homes, shade and food to many living beings such as birds and insects.

21. What can students create to attract butterflies to the school?

Answer: Students can create a butterfly garden to attract butterflies.

22. Why is it important to follow traffic rules?

Answer: It is important to follow traffic rules because they help prevent road accidents.

23. Why can students make a signboard near the school gate?

Answer: Students can make a signboard to give drivers, parents and students a clear road-safety message.

24. What should students do first during a fire drill?

Answer: Students should move quickly and calmly towards the nearest exit route.

25. How should a person move when there is smoke during a fire?

Answer: A person should crawl low under the smoke with the mouth covered.

26. Where should students gather after leaving the building during a fire?

Answer: Students should gather at the designated assembly point.

27. What should students do if someone is missing at the assembly point?

Answer: Students should immediately inform the staff or teachers if someone is missing.

28. How can we show respect and kindness at school?

Answer: We can show respect and kindness by waiting for our turn, using kind words and helping others.

29. How does good behaviour affect our surroundings?

Answer: Good behaviour makes our surroundings peaceful, welcoming and pleasant.

30. Mention one action that can make school a happier place.

Answer: Keeping the school clean is one action that can make it a happier place.

4.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – HOTS Type:

1. What should you do if you see a tap dripping continuously in your school?

Answer: I should close the tap properly and report the leak so that water is not wasted.

2. Why should lights and fans be switched off when nobody is using a classroom?

Answer: Lights and fans should be switched off in an empty classroom to avoid wasting electricity.

3. How can a classroom make better use of natural light?

Answer: A classroom can use sunlight entering through its windows instead of switching on lights unnecessarily.

4. What would you suggest if your school playground has very few trees?

Answer: I would suggest planting and caring for more trees to provide shade and make the campus greener.

5. Why would planting trees near classrooms help during hot weather?

Answer: Planting trees near classrooms would provide shade and help keep the surroundings cool.

6. Which roof would you choose for a school in a hot area—a white roof or a black roof, and why?

Answer: I would choose a white roof because it reflects the Sun's heat and helps keep the building cool.

7. Why does a black tile become hotter than a white tile when both are kept in the Sun?

Answer: A black tile becomes hotter because a black surface absorbs more heat.

8. What should you do if you find food peels mixed with paper waste?

Answer: I should separate the food peels as wet waste and the paper as dry or recyclable waste.

9. How does separating waste help sanitation workers?

Answer: Separating waste makes waste management easier and safer for sanitation workers.

10. What should you do with an old newspaper instead of throwing it into a dustbin?

Answer: I should keep the old newspaper separately and give it to a recycler.

11. Why should a small leak in a tap not be ignored?

Answer: A small leak should not be ignored because it can waste a large amount of water over time.

12. How can rainwater be useful in making a school greener?

Answer: Collected rainwater can be used wisely for purposes such as caring for plants and reducing water wastage.

13. What would you conclude if water kept under a tree is cooler than water kept in the Sun?

Answer: I would conclude that the shade provided by trees helps keep the surroundings cooler.

14. Why should schools grow plants that attract birds and butterflies?

Answer: Such plants can support birds and butterflies and make the school campus greener.

15. What would you suggest if you notice vehicles speeding in front of your school?

Answer: I would suggest putting up clear safety signboards and encouraging drivers to follow traffic rules.

16. How can students help improve road safety near the school gate?

Answer: Students can observe traffic problems and design signboards with clear safety messages.

17. Why should you remain calm instead of running during a fire drill?

Answer: Remaining calm helps students move safely towards the nearest exit without creating panic.

18. What should you do if smoke makes it difficult to breathe during a fire?

Answer: I should crawl low under the smoke with my mouth covered to breathe cleaner air.

19. Why should you never return to a building after safely coming out during a fire?

Answer: I should not return because going back into the building could put me in danger.

20. What should you do if you discover that a classmate is missing at the assembly point?

Answer: I should immediately inform a teacher or staff member that the classmate is missing.

21. What should you do if a student throws a wrapper on the playground?

Answer: I should politely encourage the student to put the wrapper in the correct dustbin.

22. How would you respond if some students pushed ahead of others at the water tap?

Answer: I would ask them to wait for their turn and respect those already in the line.

23. **What should you do if you see a student scribbling on a classroom bench?**
Answer: I should politely ask the student to stop because school property should be cared for.
24. **How should you respond when a student is teasing another student?**
Answer: I should discourage the teasing and encourage respectful and kind behaviour.
25. **Why can one student's bad habit of littering influence other students?**
Answer: Other students may copy the behaviour they observe and begin littering too.
26. **How can your behaviour help make school a happy place?**
Answer: I can make school happier by being kind, polite, helpful and responsible.
27. **What would you do to help a shy classmate feel included at school?**
Answer: I would speak kindly to the classmate and invite them to join classroom or group activities.
28. **How can students contribute to solving environmental problems in their community?**
Answer: Students can spread awareness and practise responsible actions such as saving water and managing waste.
29. **If you were principal for a day, what one change would you make to create a greener school?**
Answer: I would encourage students to plant and care for more trees around the school campus.
30. **Why are small actions by every student important for creating a happy school?**
Answer: Small responsible actions by all students together can make the school cleaner, safer, greener and happier.

4.7 Two-mark questions with Answers of LOTS Type: (20 Questions)

Two-Mark Descriptive Questions with Answers – LOTS Type:

1. What is a green school? Mention one feature of it.

Answer:

1. A green school is a school that cares for its environment and surroundings.
2. It saves water, manages waste, uses electricity carefully and takes care of trees.

2. Name any four School Explorer Teams mentioned in the chapter.

Answer:

1. Water Watchers and Electricity Savers are two School Explorer Teams.
2. Waste Warriors and Green Guardians are two other School Explorer Teams.

3. What are the responsibilities of Water Watchers?

Answer:

1. Water Watchers check for leaking taps and wastage of water.
2. They also observe whether water tanks are clean and covered and whether wet places could breed mosquitoes.

4. What do Electricity Savers observe in the school?

Answer:

1. Electricity Savers check whether lights and fans are left on when nobody is using them.
2. They also observe whether classrooms make use of natural light.

5. What are the duties of Green Guardians?

Answer:

1. Green Guardians observe the trees and plants in the school and find out who takes care of them.

2. They identify places for planting more trees and observe birds and butterflies visiting green areas.

6. What do Waste Warriors observe around the school?

Answer:

1. Waste Warriors look for litter and check whether there are enough dustbins around the school.
2. They also check whether students use the bins and whether separate bins are provided for different types of waste.

7. How can we reduce and manage waste?

Answer:

1. We can reduce waste by using only what we need, reusing things and not throwing away useful items.
2. The remaining waste should be separated into wet and dry categories for better management.

8. How are the boxes labelled in the waste segregation game?

Answer:

1. The green box is labelled for wet waste and the blue box for dry waste.
2. A third box is labelled “Items for recycler.”

9. How do trees and windows help keep classrooms cool?

Answer:

1. Trees provide shade and help reduce the heat around classrooms.
2. Windows allow the breeze to enter and help keep classrooms cooler.

10. What is the difference between white and black surfaces when exposed to sunlight?

Answer:

1. A white surface reflects the Sun's heat and therefore remains comparatively cooler.
2. A black surface absorbs heat and becomes warmer.

11. Why should we take care of dripping taps?

Answer:

1. Even a small leak from a dripping tap can waste a lot of water over time.
2. Therefore, taps should be checked and water should be used carefully.

12. What is Jal Shakti Abhiyan? Mention one action it encourages.

Answer:

1. Jal Shakti Abhiyan is a campaign to save and protect water.
2. It encourages people to plant trees, collect rainwater and use water wisely.

13. State any two benefits of trees mentioned in the chapter.

Answer:

1. Trees keep the air clean and provide shade.
2. They provide food to birds and insects and help keep the surroundings cool.

14. Why is it important to follow traffic rules?

Answer:

1. Many road accidents happen because people do not follow traffic rules correctly.
2. Knowing and following traffic rules helps improve safety on roads.

15. What should students remember while designing a traffic signboard for the school gate?

Answer:

1. The signboard should give a clear message to drivers, parents or students.
2. Students can use simple words, drawings or symbols to make the area safer.

16. What should a student do while moving through smoke during a fire?

Answer:

1. The student should crawl low under the smoke with the mouth covered.

2. This helps the student breathe cleaner air while moving towards safety.

17. What should students do after leaving the building during a fire?

Answer:

1. Students should go to the assembly point and stay with their group.
2. They should immediately alert staff or teachers if anyone is missing or injured.

18. Mention two actions that show respect and kindness.

Answer:

1. Waiting for our turn and using kind words show respect and kindness.
2. Helping someone and keeping our surroundings clean are also examples of good behaviour.

19. How can students make their school a happy place?

Answer:

1. Students can save water, manage waste and care for plants and school property.
2. They can also treat the people around them with kindness, care and respect.

20. What does the chapter teach us about our behaviour?

Answer:

1. Our behaviour can make school, home and public places peaceful and welcoming.
2. Respectful and kind behaviour helps everyone feel happy and comfortable.

4.8. Two-mark questions with Answers of HOTS Type: (15 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. **You notice that lights and fans are switched on in an empty classroom. What would you do and why?**

Answer:

1. I would switch off the unused lights and fans.
2. This would prevent unnecessary use of electricity and help make the school greener.

2. **Your school has a leaking tap. Why should it be repaired immediately?**

Answer:

1. Even a small leak can waste a large amount of water over time.
2. Repairing the tap will conserve water and encourage its careful use.

3. **A classroom becomes very hot in the afternoon. Suggest two ways to keep it cooler.**

Answer:

1. Trees can be planted nearby to provide shade, and windows can be used to allow breeze inside.
2. The roof can be painted white because a white surface reflects the Sun's heat.

4. **Why would you choose white rather than black for the roof of a school in a hot area?**

Answer:

1. A white surface reflects the Sun's heat and helps the roof remain cooler.
2. A black surface absorbs heat and would make the roof warmer.

5. **You find food peels, paper and recyclable materials mixed in one dustbin. What should be done?**

Answer:

1. The waste should be separated into wet waste, dry waste and items for recyclers.
2. Proper segregation makes waste easier to manage and helps keep the surroundings clean.

6. How can students make the work of sanitation workers easier and safer?

Answer:

1. Students should separate waste properly before putting it into the correct bins.
2. They should also avoid littering and play a responsible role in waste management.

7. If your school produces many old newspapers, what should be done with them and why?

Answer:

1. Old newspapers should be kept separately and given to recyclers.
2. This allows useful materials to be reused or recycled instead of being thrown away.

8. Water kept under a tree is cooler than water kept in the Sun. What can you conclude from this observation?

Answer:

1. The observation shows that the shade of trees helps reduce heating.
2. Therefore, increasing greenery can help keep the school surroundings cooler.

9. You notice stagnant water near your school garden. Why should you report it?

Answer:

1. Wet places around the school could become breeding places for mosquitoes.
2. Reporting the problem helps keep the school surroundings clean and safe.

10. Vehicles often speed in front of your school gate. Suggest two actions students can take.

Answer:

1. Students can design clear traffic signboards for drivers, parents and other road users.
2. They can also discuss ways to improve traffic safety around the school.

11. Why is following traffic rules important near a school?

Answer:

1. Not following traffic rules can lead to road accidents.
2. Following the rules makes the area around the school safer for children and other road users.

12. What would you do if you smelled smoke while you were inside the school building?

Answer:

1. I would move calmly towards the nearest exit and crawl low under the smoke if necessary.
2. I would go to the assembly point and stay with my group.

13. Why should a student never return to a building after coming out safely during a fire?

Answer:

1. Returning to the building could put the student in danger.
2. The student should remain at the assembly point and inform staff or teachers if someone is missing.

14. A student throws a wrapper in the playground and a younger child copies the action. What does this teach us?

Answer:

1. Our behaviour can influence the actions of other people around us.
2. Therefore, students should set a good example by keeping their surroundings clean.

15. What would you do if you saw two students pushing and skipping the line at a water tap?

Answer:

1. I would politely ask them to wait for their turn instead of pushing others.
2. Waiting patiently shows respect and helps maintain a peaceful school environment.

16. A student is making fun of another student repeatedly. How would you respond?

Answer:

1. I would discourage the teasing and support the student who is being made fun of.
2. Using kind words and treating others respectfully helps make everyone feel happy.

17. Your school has very few birds and butterflies. What could students do to improve the situation?

Answer:

1. Students could identify and grow plants that attract birds and butterflies.
2. They could also create a butterfly garden and take care of the plants regularly.

18. How can rainwater help a school become more environmentally responsible?

Answer:

1. The school can collect rainwater instead of allowing it to go unused.
2. Collecting rainwater encourages students to understand and practise careful use of water.

19. If you were the principal for a day, suggest two changes to make your school greener and happier.

Answer:

1. I would encourage planting more trees and ensure that water and electricity are not wasted.
2. I would promote cleanliness, kindness and respect among all students.

20. Why can small actions by students bring a big change to their school?

Answer:

1. Actions such as saving water, managing waste and caring for plants improve the school environment.
2. When students also show kindness and respect, they help make the school a happier place for everyone.

4.9. Three-mark questions with Answers of LOTS Type: (10 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. What is a green school? Mention its important features.

Answer:

1. A green school manages its waste properly.
2. It saves water and uses electricity carefully.
3. It plants more trees and takes care of them to keep the campus green.

2. What are the main responsibilities of Water Watchers?

Answer:

1. Water Watchers check whether there are leaking taps and whether water is being wasted.
2. They check whether water tanks are clean and covered.
3. They also look for wet places that could become breeding grounds for mosquitoes.

3. What do Electricity Savers observe in their school?

Answer:

1. They check whether lights and fans are left on when nobody is using them.
2. They observe whether classrooms make good use of natural light.
3. They also identify which areas of the school feel hottest and coolest during the day.

4. What are the duties of Green Guardians?

Answer:

1. Green Guardians observe the trees and plants growing in the school.
2. They identify places where more trees and plants can be grown.
3. They also observe birds and butterflies visiting green areas and check for a compost pit.

5. What do Waste Warriors observe around the school?

Answer:

1. Waste Warriors identify places where litter is found and observe the different kinds of litter.
2. They check whether there are enough dustbins and whether students use them.
3. They also check whether separate bins are available for food waste and other waste.

6. Explain three ways in which waste can be managed properly.

Answer:

1. We should reduce waste by using only what we need.
2. Useful things should be reused instead of being thrown away.
3. Remaining waste should be separated into wet and dry categories for better management.

7. Explain the waste segregation game described in the chapter.

Answer:

1. Paper chits containing names or drawings of different waste items are prepared.
2. Three boxes are labelled for wet waste, dry waste and items for recyclers.
3. Students place each chit in the correct box and then discuss whether the items have been properly segregated.

8. Mention three ways by which classrooms and school surroundings can be kept cool.

Answer:

1. Trees can provide shade and help keep the surroundings cool.
2. Windows allow breeze to enter classrooms and improve ventilation.
3. A white roof reflects the Sun's heat and helps keep the building cooler.

9. Describe the activity used to understand water wastage from a dripping tap.

Answer:

1. Water from a dripping tap or a small hole in a used water bottle is collected in a glass.
2. Students measure the time taken for one glass to become full.
3. They use this observation to estimate how many glasses of water could be wasted in one day.

10. What does Jal Shakti Abhiyan encourage people to do?

Answer:

1. Jal Shakti Abhiyan encourages people to save and protect water.
2. It encourages people to plant trees and collect rainwater.
3. It also promotes fixing leaks and using water wisely.

11. State three benefits of trees mentioned in the chapter.

Answer:

1. Trees help keep the air clean and provide shade.
2. They provide food to birds and insects.
3. They also help keep the surroundings cool.

12. Describe the activity used to understand the cooling effect of trees.

Answer:

1. Two glasses of water are taken and their initial temperatures are measured.

2. One glass is kept under a tree and the other under the Sun for one hour.
3. Their temperatures are measured again and compared to understand the effect of shade.

13. What do Traffic Trackers observe near the school gate?

Answer:

1. They observe what happens outside the school gate during arrival and exit times.
2. They check whether there is a pedestrian crossing for children.
3. They also observe whether vehicles speed in front of the school.

14. What should students remember about traffic safety?

Answer:

1. Many accidents happen because people do not follow traffic rules correctly.
2. Everyone should know and follow traffic rules.
3. Students can create clear signboards using words, drawings or symbols to improve safety near the school gate.

15. Mention three important actions students should follow during a fire.

Answer:

1. Students should move quickly and calmly towards the nearest exit without running.
2. They should crawl low under smoke with their mouth covered and should not hide.
3. After leaving the building, they should go to the assembly point and stay with their group.

16. How can students show respect and kindness in everyday life?

Answer:

1. Students can show respect by waiting patiently for their turn.
2. They can use kind words and help people who need assistance.
3. They can also keep their school and surroundings clean.

17. What actions can students take to make their school a happy place?

Answer:

1. Students can save water and manage waste properly.
2. They can help keep the school cool and care for plants and school surroundings.
3. They can treat everyone around them with kindness, care and respect.

4.10. Three-mark questions with Answers of HOTS Type: (16 Questions)

Three-Mark Descriptive Questions with Answers – HOTS Type:

1. Your classroom remains hot even when the fans are running. What three changes would you suggest?

Answer:

1. I would suggest planting more trees near the classroom to provide shade.
2. I would keep the windows open where possible so that natural breeze can enter.
3. I would suggest painting the roof white because a white surface reflects the Sun's heat.

2. You notice that several taps in your school are dripping. What actions would you take to prevent water wastage?

Answer:

1. I would report the leaking taps to the teacher so that they can be repaired.
2. I would encourage students to close taps properly after use.
3. I would demonstrate how much water a dripping tap can waste to create awareness among students.

3. Your school throws wet waste, dry waste and recyclable materials into the same bin. How would you improve the system?

Answer:

1. I would suggest providing separate boxes for wet waste, dry waste and items for recyclers.
2. I would encourage students to identify each type of waste and place it in the correct box.
3. Proper segregation would make waste management easier and help keep the school clean.

4. Why is separating waste important for sanitation workers as well as the environment?

Answer:

1. Separating waste makes the work of sanitation workers easier and safer.
2. It allows useful materials to be sent for reuse or recycling instead of being discarded.
3. Proper waste management also helps keep the surroundings clean.

5. Suppose your school campus has very few trees. What problems could this cause, and what would you suggest?

Answer:

1. With fewer trees, the campus may have less shade and may feel warmer.
2. There may also be fewer suitable places for birds, insects and butterflies.
3. I would suggest planting and caring for more trees and plants around the campus.

6. Two glasses of water are kept for an hour—one under a tree and another under the Sun. What would you expect and what does the activity teach?

Answer:

1. I would expect the water kept under the tree to remain cooler than the water kept in the Sun.
2. The tree provides shade and reduces direct exposure to the Sun.
3. The activity helps us understand how greenery can help keep school surroundings cooler.

7. Vehicles often speed near your school gate during arrival and dispersal time. Suggest three ways to improve safety.

Answer:

1. Students can create clear signboards asking drivers to slow down and follow traffic rules.
2. Traffic Trackers can observe conditions near the gate and identify unsafe practices.
3. Students can discuss their observations and suggest measures to make the school entrance safer.

8. During a fire drill, a student becomes frightened and starts running. What should the student do instead?

Answer:

1. The student should remain calm and move quickly towards the nearest exit without running.
2. If there is smoke, the student should crawl low with the mouth covered.
3. After leaving the building, the student should go directly to the assembly point and remain with the group.

9. You have reached the assembly point during a fire drill but notice that your friend is missing. What should you do?

Answer:

1. I should remain at the assembly point instead of going back into the building.
2. I should immediately tell a teacher or staff member that my friend is missing.
3. I should stay calmly with my group and follow the instructions given by the teachers.

10. A student throws a wrapper in the playground, and a younger student copies the action. What can you learn from this situation?

Answer:

1. The situation shows that our behaviour can influence other people's behaviour.
2. Students should therefore set a good example by putting waste in the correct bin.
3. Responsible behaviour by everyone can help keep the school clean and welcoming.

11. Some students push others and skip the queue at the water tap. How would you handle the situation?

Answer:

1. I would politely ask the students to stop pushing and wait for their turn.
2. I would explain that respecting others makes the school peaceful and welcoming.
3. I would encourage everyone to follow the queue and use the water tap responsibly.

12. A classmate is being teased repeatedly by other students. What should you do?

Answer:

1. I would discourage the students from teasing the classmate.
2. I would support the classmate and use kind and respectful words.
3. Such behaviour would help create a safer and happier environment for everyone.

13. Your school wants to attract more birds and butterflies. What plan would you suggest?

Answer:

1. I would find out which trees and plants attract birds and butterflies.
2. I would suggest planting those species in suitable areas of the school campus.
3. With the teacher's help, students could create and care for a butterfly garden.

14. If your school wants to become a model green school, what three areas should students focus on?

Answer:

1. Students should save water and use electricity carefully.
2. They should manage waste properly by reducing, reusing and separating it.
3. They should plant and care for more trees to make the campus greener.

15. If you were the principal for a day, what three changes would you make to improve your school?

Answer:

1. I would improve waste segregation and ensure that water and electricity are not wasted.
2. I would increase greenery by planting and caring for more trees and plants.
3. I would encourage safety, kindness and respectful behaviour so that everyone feels happy at school.

16. Why are small actions by individual students important in creating a happy school?

Answer:

1. Actions such as turning off unused lights and saving water help conserve resources.
2. Keeping the surroundings clean and caring for plants improve the school environment.
3. Kindness, politeness and helping others make everyone feel happier and more welcome.

4.11 Five-mark questions with Answers of LOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type

1. What is a green school? Explain the important features of a green school.

Answer:

1. A green school is a school that takes steps to care for its environment.
2. It manages waste properly and keeps its surroundings clean.
3. It saves water and prevents unnecessary wastage.
4. It uses electricity carefully and avoids unnecessary use of lights and fans.
5. It plants more trees and takes proper care of them to keep the campus green.

2. Explain the roles of the different School Explorer Teams.

Answer:

1. **Water Watchers** check for leaking taps, water wastage, water tanks and wet places.
2. **Electricity Savers** observe the use of lights, fans and natural light in classrooms.
3. **Waste Warriors** check litter, dustbins and the proper separation of waste.
4. **Green Guardians** observe trees, plants, birds, butterflies and places where more trees can be planted.
5. **Traffic Trackers** observe traffic, pedestrian crossings and speeding vehicles near the school gate.

3. Explain how waste can be reduced and managed properly in school.

Answer:

1. We should use only what we need so that less waste is produced.
2. Useful items should be reused instead of being thrown away.
3. Waste should be separated into wet and dry categories for proper management.
4. Old newspapers and other recyclable materials should be kept separately for recyclers.
5. Proper waste management helps keep the school and its surroundings clean.

4. Describe the waste segregation activity given in the chapter.

Answer:

1. Students prepare 30–40 paper chits containing the names or drawings of different waste items.
2. Three empty boxes are taken for sorting the waste items.
3. The green box is labelled for wet waste and the blue box for dry waste.
4. The third box is labelled “**Items for recycler.**”
5. Students place each chit in the correct box and then discuss whether the items have been properly segregated.

5. Explain different ways of keeping the school and classrooms cool.

Answer:

1. Trees provide shade and help keep the school surroundings cool.
2. Classrooms with windows allow breeze to enter and improve ventilation.
3. A white roof helps keep a building cool because it reflects the Sun's heat.
4. A black surface absorbs heat and therefore becomes warmer.
5. Planting more trees and making suitable use of natural ventilation can help create a cooler school environment.

6. Describe the activity used to understand how much water a dripping tap can waste.

Answer:

1. Students find a dripping tap or make a small hole in a used water bottle filled with water.
2. They allow the dripping water to collect in a glass.
3. They measure the time taken for one glass to become full.
4. They calculate how many glasses could become full in one day.
5. The activity demonstrates how a small leak can waste a large amount of water without being noticed.

7. Explain the importance of trees and greenery around the school.

Answer:

1. Trees are homes to many living beings.
2. They help keep the air clean.
3. Trees provide shade and help keep the surroundings cool.
4. They provide food to birds and insects.
5. Schools can grow suitable plants and create butterfly gardens to support birds and butterflies.

8. Explain the importance of traffic rules and road safety near the school.

Answer:

1. Many road accidents happen because people do not follow traffic rules correctly.
2. Everyone should know and follow traffic rules for safer roads.
3. Students can observe what happens outside the school gate during arrival and exit times.
4. They can check for pedestrian crossings and observe whether vehicles are speeding.
5. Students can design signboards using simple words, drawings or symbols to communicate safety messages.

9. Explain the important safety measures students should follow during a fire.

Answer:

1. Students should move quickly and calmly towards the nearest exit without panicking or running.
2. They should crawl low under smoke with their mouth covered to breathe cleaner air.
3. They should never hide in closets or bathrooms.
4. Once outside, they should not return to the building and should go to the assembly point.
5. At the assembly point, they should immediately inform staff or teachers if anyone is missing or injured.

10. Explain how good behaviour can make school a happy place.

Answer:

1. Our behaviour can make school peaceful and welcoming.
2. Students should wait for their turn and respect the rights of others.
3. They should use kind words and avoid teasing or making fun of others.
4. Students should help others and keep their school surroundings clean.
5. Kind and polite behaviour helps everyone feel safe, respected and happy.

4.12 Five-mark questions with Answers of HOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. Your school wants to become a green school. What five actions would you suggest?

Answer:

1. I would suggest separating wet, dry and recyclable waste properly.
2. Leaking taps should be repaired and rainwater should be collected to conserve water.
3. Lights and fans should be switched off whenever they are not required.
4. More trees and suitable plants should be grown and cared for on the campus.
5. Students should form School Explorer Teams to observe problems and suggest improvements.

2. Your classroom becomes very hot during sunny afternoons. How would you make it cooler without depending only on electricity?

Answer:

1. I would plant trees near the classroom so that they provide natural shade.
2. I would make better use of windows so that fresh breeze can enter the classroom.
3. I would suggest painting the roof white because white surfaces reflect the Sun's heat.
4. I would increase greenery around the classroom because plants and trees help cool the surroundings.
5. These measures would help keep the classroom cooler while reducing unnecessary dependence on electrical appliances.

3. You find that students are mixing all kinds of waste in one dustbin. How would you solve this problem?

Answer:

1. I would explain to the students why proper waste segregation is important.
2. I would arrange separate boxes for wet waste, dry waste and items meant for recyclers.

3. I would ask students to identify each waste item before putting it into the appropriate box.
4. I would conduct the segregation game described in the chapter to help students practise correct sorting.
5. Proper segregation would improve waste management and make the work of sanitation workers easier and safer.

4. Your school has several dripping taps. Prepare a five-point plan to reduce water wastage.

Answer:

1. I would identify all the leaking or dripping taps in the school.
2. I would report them to the teachers so that they could be repaired.
3. I would demonstrate how much water a dripping tap can waste by collecting and measuring the dripping water.
4. I would encourage students to close taps properly and use water carefully.
5. I would also promote rainwater collection and other water-saving practices in the school.

5. Suppose your school campus has very few trees, birds and butterflies. What would you do to improve it?

Answer:

1. I would identify suitable places on the campus where more trees and plants could be grown.
2. I would find out which plants attract birds and butterflies.
3. I would work with teachers and classmates to create a butterfly garden.
4. I would ensure that the newly planted trees and plants are regularly cared for.
5. Increased greenery would provide shade and food for living beings and help keep the surroundings cool.

6. Vehicles are speeding near your school gate and creating danger for students. How would you improve the situation?

Answer:

1. I would first observe traffic conditions during school arrival and exit times.
2. I would check whether there is a safe pedestrian crossing for children.
3. I would identify speeding vehicles and other unsafe practices near the school gate.
4. I would work with classmates to design clear signboards using simple words, drawings or symbols.
5. I would encourage drivers, parents and students to follow traffic rules to make the area safer.

7. During a fire drill, some students panic, run and try to hide. What advice would you give them?

Answer:

1. I would tell them to remain calm and move quickly towards the nearest exit without running.
2. If there is smoke, they should crawl low with their mouths covered to breathe cleaner air.
3. They should never hide in closets or bathrooms during a fire.
4. Once outside, they should never return to the building and should go directly to the assembly point.
5. They should inform teachers or staff immediately if anyone is missing or injured.

8. You see a student throwing litter, another pushing in a queue and another teasing a classmate. How would you respond?

Answer:

1. I would encourage the first student to put the litter in the proper dustbin.
2. I would ask the student who is pushing to wait patiently for their turn.
3. I would discourage teasing and encourage the student to use kind and respectful words.
4. I would explain that our behaviour can influence other people around us.
5. By practising cleanliness, patience, kindness and respect, we can make school peaceful and welcoming.

9. If you were the principal for a day, what five changes would you make to create a happier, safer and greener school?

Answer:

1. I would introduce proper waste segregation and encourage recycling.
2. I would ensure that leaking taps are repaired and water is used wisely.
3. I would encourage careful use of electricity and greater use of natural light.
4. I would plant more trees and create green spaces for birds and butterflies.
5. I would strengthen traffic and fire safety while encouraging kindness and respect among everyone.

10. “What we do matters.” Explain how students’ everyday actions can make their school a happier place.

Answer:

1. Students can save water by preventing wastage and reporting leaking taps.
2. They can conserve electricity by switching off unnecessary lights and fans.
3. They can keep the campus clean by segregating waste and avoiding littering.
4. They can care for trees, plants and school property to improve their surroundings.
5. They can treat others with kindness, respect and helpfulness so that everyone feels happy and welcome.

4.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. During a school inspection, you notice leaking taps, overflowing dustbins, unnecessary lights and fans, and very few trees. As a student, suggest five actions to improve your school.

Answer:

1. I would report the leaking taps and request that they be repaired to prevent water wastage.
2. I would introduce separate bins for wet, dry and recyclable waste.
3. I would encourage everyone to switch off lights and fans when they are not needed.
4. I would organise a tree-planting activity and ensure that the plants are regularly cared for.
5. I would involve the School Explorer Teams in checking these areas regularly and reporting improvements.

2. Your school produces food waste, used paper, plastic bottles and old newspapers every day. Prepare a five-point waste-management plan for your school.

Answer:

1. I would ask students to reduce waste by using only what they need.
2. I would encourage them to reuse useful materials instead of immediately throwing them away.
3. Food waste would be separated as wet waste and paper or plastic would be placed with dry waste.
4. Old newspapers and other recyclable items would be collected separately and given to recyclers.

- Students would be taught to use the correct bins so that waste management becomes easier and more effective.

3. Your class wants to find out how much water is wasted by a dripping tap. Explain how you would conduct the investigation.

Answer:

- I would place a glass below the dripping tap to collect the water.
- I would measure the time taken for the glass to become full.
- Using this observation, I would calculate how many glasses could be filled by the dripping tap in one day.
- I would present the result to my classmates to show how even a small leak can waste a large amount of water.
- I would suggest repairing the tap and using water wisely to prevent further wastage.

4. Your classroom becomes very hot during summer. Apply the ideas from the chapter to make it naturally cooler.

Answer:

- I would plant trees near the classroom so that their shade helps reduce heat.
- I would use windows properly to allow natural breeze to enter the room.
- I would suggest painting the roof white because white surfaces reflect the Sun's heat.
- I would increase greenery around the classroom to help keep the surroundings cool.
- These methods would reduce heat naturally and make the classroom more comfortable.

5. Many vehicles move quickly near your school gate when children arrive and leave. Prepare a safety plan for the area.

Answer:

- I would observe the traffic near the gate during arrival and exit times.
- I would check whether children have a safe pedestrian crossing.
- I would identify places where speeding or other unsafe traffic behaviour occurs.
- I would prepare clear signboards using simple words, drawings and symbols to remind drivers to slow down.
- I would encourage students, parents and drivers to follow traffic rules to make the school entrance safer.

6. During a fire drill, you find smoke in the corridor and some students begin to panic. Explain how you would apply the fire-safety rules from the chapter.

Answer:

- I would ask everyone to remain calm and move quickly towards the nearest safe exit without running.
- If there is smoke, I would tell them to crawl low with their mouths covered.
- I would remind everyone not to hide in closets or bathrooms.
- After leaving the building, we would go directly to the assembly point and never return inside.
- I would immediately inform a teacher or staff member if anyone was missing or injured.

7. Your school has very little greenery and hardly any butterflies visit the campus. How would you develop a greener school environment?

Answer:

- I would identify areas of the school where more trees and plants could be grown.
- I would find out which plants are suitable for attracting butterflies and other living beings.
- I would work with my classmates and teacher to create a butterfly garden.
- We would regularly water and care for the plants so that they grow well.
- The increased greenery would provide shade, support living beings and help keep the surroundings cooler.

8. You notice students pushing in queues, littering, teasing classmates and making unnecessary noise. What steps would you take to make the school happier?

Answer:

1. I would encourage students to wait patiently for their turn instead of pushing.
2. I would remind everyone to put waste in the proper bins and keep the surroundings clean.
3. I would discourage teasing and encourage the use of kind and respectful words.
4. I would explain that our behaviour affects other people and can influence how they behave.
5. By practising kindness, cleanliness, patience and respect, we can make the school peaceful and welcoming.

9. Your class has been asked to conduct a “Green School Audit.” How would you organise it?

Answer:

1. I would divide the students into Water Watchers, Electricity Savers, Waste Warriors, Green Guardians and Traffic Trackers.
2. Each team would observe the part of the school related to its assigned responsibility.
3. The teams would record problems such as leaking taps, unnecessary electricity use, litter, lack of greenery and unsafe traffic.
4. All teams would discuss their observations and identify areas that need improvement.
5. The class would then suggest practical actions to make the school greener, cleaner and safer.

10. Imagine that you are the principal of your school for one day. What five practical changes would you introduce to make it a happy place?

Answer:

1. I would introduce proper waste segregation and encourage students to reduce and reuse materials.
2. I would ensure that water is saved by repairing leaks and encouraging careful use.
3. I would promote responsible electricity use and greater use of natural light and ventilation.
4. I would improve greenery, traffic safety and fire-safety awareness throughout the school.
5. I would encourage every student to practise kindness, respect, cleanliness and helpful behaviour so that everyone feels welcome.

4.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. A school wants to become a “green school.” Which combination of actions best supports this goal?

- A. Using more electricity and cutting trees
- B. Saving water, managing waste and caring for trees
- C. Keeping all lights switched on
- D. Mixing all types of waste

Answer: B. Saving water, managing waste and caring for trees

2. Which School Explorer Team should investigate a leaking tap?

- A. Traffic Trackers
- B. Green Guardians
- C. Water Watchers
- D. Waste Warriors

Answer: C. Water Watchers

3. A classroom has enough sunlight, but all its electric lights are switched on. Which team should report this?

- A. Electricity Savers
- B. Waste Warriors
- C. Water Watchers
- D. Traffic Trackers

Answer: A. Electricity Savers

4. Which observation would be MOST relevant to Green Guardians?

- A. Number of leaking taps
- B. Number of speeding vehicles
- C. Places where more trees can be planted
- D. Number of lights left switched on

Answer: C. Places where more trees can be planted

5. A student finds banana peels, paper and old newspapers mixed together. What should be done FIRST?

- A. Burn everything
- B. Throw everything into one bin
- C. Segregate the waste into suitable categories
- D. Leave it for sanitation workers

Answer: C. Segregate the waste into suitable categories

6. In the segregation activity, which pairing is correct?

- A. Green box—wet waste
- B. Blue box—wet waste
- C. Green box—recyclable items only
- D. Blue box—food waste only

Answer: A. Green box—wet waste

7. Why should old newspapers be kept separately?

- A. They can be given to recyclers.
- B. They increase wet waste.
- C. They make classrooms warmer.
- D. They attract butterflies.

Answer: A. They can be given to recyclers.

8. Which roof would most likely help keep a school building cooler?

- A. Black roof
- B. White roof
- C. Any roof with all windows closed
- D. A roof covered with waste

Answer: B. White roof

9. Two identical tiles, one black and one white, are kept in sunlight. Which is expected to become warmer?

- A. White tile
- B. Black tile
- C. Both must remain equally cool
- D. Neither can absorb heat

Answer: B. Black tile

10. A school wants to cool its surroundings naturally. Which action would be MOST useful?

- A. Removing trees
- B. Closing all windows

- C. Planting more trees
- D. Keeping lights switched on

Answer: C. Planting more trees

11. A tap fills one glass with dripping water in 30 minutes. How many such glasses could it fill in 3 hours at the same rate?

- A. 3
- B. 6
- C. 9
- D. 12

Answer: B. 6

Reason: 3 hours = 180 minutes; $180 \div 30 = 6$ glasses. The chapter uses this type of activity to understand water wastage from dripping taps.

12. What is the main lesson from the dripping-tap activity?

- A. Dripping water cannot be measured.
- B. Small leaks can waste a large amount of water over time.
- C. Water should always be stored in glasses.
- D. Leaking taps keep surroundings cool.

Answer: B. Small leaks can waste a large amount of water over time.

13. Which action best matches the message of Jal Shakti Abhiyan?

- A. Allowing taps to leak
- B. Cutting down trees
- C. Collecting rainwater and using water wisely
- D. Using more water than necessary

Answer: C. Collecting rainwater and using water wisely

14. Two glasses of water are kept for one hour, one under a tree and another in direct sunlight. What is this experiment mainly designed to investigate?

- A. Waste segregation
- B. Cooling effect of tree shade
- C. Traffic safety
- D. Fire safety

Answer: B. Cooling effect of tree shade

15. Which of the following is NOT mentioned as a benefit of trees?

- A. Providing shade
- B. Providing food for birds and insects
- C. Helping keep surroundings cool
- D. Increasing traffic speed

Answer: D. Increasing traffic speed

16. A school wants more butterflies on its campus. Which plan is most appropriate?

- A. Remove flowering plants.
- B. Create a butterfly garden with suitable plants.
- C. Cover all green areas with concrete.
- D. Increase vehicle movement.

Answer: B. Create a butterfly garden with suitable plants.

17. Which situation should concern the Traffic Trackers MOST?

- A. A dripping tap
- B. A broken dustbin
- C. Vehicles speeding near the school gate
- D. A plant needing water

Answer: C. Vehicles speeding near the school gate

18. Why should a school-gate traffic signboard use simple words, drawings or symbols?

- A. To make the board more expensive
- B. To communicate the safety message clearly
- C. To make traffic move faster
- D. To decorate the classroom

Answer: B. To communicate the safety message clearly

19. During a fire, a corridor is filled with smoke. What should a student do?

- A. Stand upright and run
- B. Hide in a bathroom
- C. Crawl low with the mouth covered
- D. Return to the classroom

Answer: C. Crawl low with the mouth covered

20. A student has safely left the building during a fire but remembers that a friend may still be inside. What is the safest action?

- A. Go back inside immediately.
- B. Wait silently outside.
- C. Inform a teacher or staff member that the friend is missing.
- D. Hide near the building.

Answer: C. Inform a teacher or staff member that the friend is missing.

21. Which sequence is most appropriate during a fire drill?

- A. Panic → hide → return inside
- B. Run → collect belongings → leave
- C. Move calmly to exit → reach assembly point → stay with group
- D. Hide → wait alone → return to class

Answer: C. Move calmly to exit → reach assembly point → stay with group

22. Ravi pushes ahead of others while waiting at the water tap. Which action would best improve the situation?

- A. Everyone should push faster.
- B. Ravi should wait patiently for his turn.
- C. Students should stop using the tap.
- D. The queue should be removed.

Answer: B. Ravi should wait patiently for his turn.

23. A senior student throws a wrapper on the playground, and younger students copy him. What does this BEST demonstrate?

- A. Behaviour can influence others.
- B. Litter disappears naturally.
- C. Younger students cannot learn from others.
- D. Cleanliness is only the sanitation worker's responsibility.

Answer: A. Behaviour can influence others.

24. Which combination would contribute MOST to making a school a happy place?

- A. Wasting water + littering + teasing others
- B. Saving water + caring for plants + showing kindness
- C. Speeding near the gate + wasting electricity + pushing
- D. Mixing waste + damaging plants + making noise

Answer: B. Saving water + caring for plants + showing kindness

25. Which student demonstrates the BEST understanding of the chapter's overall message?

- A. Riya switches off unused lights but throws waste anywhere.
- B. Mohan plants trees but wastes water every day.
- C. Tara saves resources, keeps the surroundings clean and treats others kindly.
- D. Arun follows traffic rules but teases classmates.

Answer: C. Tara saves resources, keeps the surroundings clean and treats others kindly.

26. Which pair is incorrectly matched?

- A. Water Watchers — leaking taps
- B. Green Guardians — trees and plants
- C. Waste Warriors — litter and dustbins
- D. Traffic Trackers — electricity consumption

Answer: D. Traffic Trackers — electricity consumption

27. A school has clean surroundings but wastes water and electricity. Can it fully satisfy the idea of a green school described in the chapter?

- A. Yes, because cleanliness alone is sufficient.
- B. Yes, if the school has a large building.
- C. No, because a green school should also save water and use electricity carefully.
- D. No, because a green school should not use electricity at all.

Answer: C. No, because a green school should also save water and use electricity carefully.

28. Which action shows both environmental responsibility and respect for workers?

- A. Mixing all waste and asking sanitation workers to separate it
- B. Throwing waste outside the bins
- C. Segregating waste correctly before disposal
- D. Leaving waste under classroom desks

Answer: C. Segregating waste correctly before disposal

29. If students want to study whether trees really help cool their school, which method would provide the BEST evidence?

- A. Ask only one student for an opinion.
- B. Compare temperature readings from a shaded and sunny location.
- C. Count the number of classrooms.
- D. Measure the amount of waste produced.

Answer: B. Compare temperature readings from a shaded and sunny location.

30. Which statement BEST summarises the central idea of “Our School—A Happy Place”?

- A. Only teachers are responsible for improving a school.
- B. A happy school needs only attractive buildings.
- C. Responsible use of resources, safety, cleanliness, greenery and good behaviour can make school a better place.
- D. Students should focus only on classroom learning.

Answer: C. Responsible use of resources, safety, cleanliness, greenery and good behaviour can make school a better place.

4.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities While Teaching Chapter 4: Our School—A Happy Place:
The following practices can make the chapter more **experiential, activity-oriented and value-based** for students:

- (1) **School Green Audit:** Divide students into the chapter’s **Water Watchers, Electricity Savers, Waste Warriors, Green Guardians and Traffic Trackers**. Let each team inspect the school campus, record observations and suggest simple improvements.
- (2) **Waste Segregation Practice:** Arrange three labelled containers for **wet waste, dry waste and items for recyclers**. Give students sample waste items or picture cards and ask them to place each in the appropriate container.

- (3) **Water-Wastage Investigation:** Demonstrate the dripping-tap activity by collecting dripping water and measuring how long it takes to fill a glass. Students can calculate how many glasses of water could be wasted in a day and discuss ways to prevent it.
- (4) **Learning Through Simple Experiments:** Conduct the chapter's temperature experiment by keeping one glass of water **under a tree** and another **in the Sun**. Students can record and compare temperatures to understand the cooling effect of trees.
- (5) **Green Campus Responsibility:** Assign small groups to care for particular plants or trees on the campus. Encourage them to observe birds and butterflies and identify suitable locations for additional greenery or a **butterfly garden**.
- (6) **Traffic-Safety Observation:** Under teacher supervision, students can observe traffic conditions near the school gate and identify pedestrian-safety concerns. They can then design simple **road-safety signboards** using words, drawings and symbols.
- (7) **Fire-Safety Drill:** Conduct periodic mock fire drills so students practise moving calmly to the nearest exit, staying low in smoke and assembling safely at the designated point. Follow the drill with a classroom discussion on what was done correctly and what can be improved.
- (8) **Role-Play for Values and Behaviour:** Use situations involving **pushing in queues, littering, teasing, helping others and showing kindness** for short role-plays. Ask students to identify respectful and responsible alternatives after each performance.
- (9) **Student-Led Awareness Campaign:** Let students prepare posters, slogans or short presentations on **saving water, saving electricity, waste management, greenery and school safety**. Display their work around the school to extend learning beyond the classroom.
- (10) **Reflection and Action Journal:** Ask each student to maintain a simple **"My Happy School Journal"** recording one responsible action each week, such as saving water, switching off an unused light, helping someone or caring for a plant. Periodically discuss how these small actions collectively contribute to a happier school, reflecting the chapter's emphasis on student participation and responsibility.

4.16 Innovations Opportunity List from the Chapter: (10 Ideas)

"Innovations" Opportunities While Teaching-Learning Chapter 4: Our School—A Happy Place:

- (1) **Green School Detective Mission:** Convert the School Explorer Teams into a detective challenge. Students become **Water Watchers, Electricity Savers, Waste Warriors, Green Guardians and Traffic Trackers**, identify real problems around the campus, and earn points for practical solutions.
- (2) **Waste-Sorting Challenge:** Create a game using picture cards of food waste, paper, bottles, newspapers and other items. Teams race to classify them correctly into **wet waste, dry waste and items for recyclers**, followed by a discussion of their choices.
- (3) **"Catch Every Drop" Mathematics Lab:** Use the chapter's dripping-water experiment as an interdisciplinary **Science + Mathematics** activity. Students measure the time required to collect dripping water and estimate how many glasses could be wasted during a day.
- (4) **Mini Heat Laboratory:** Let students compare a **black and white surface** exposed to sunlight and record their observations. They can then use the results to propose a suitable roof colour for keeping their school cooler.
- (5) **Tree-Shade Temperature Mapping:** Students can measure and compare temperatures at selected **sunny and shaded locations** around the school. They can create a simple **"Cool Spots Map"** showing how trees and shade influence temperature.

- (6) **Design-a-Butterfly-Garden Project:** Students work in groups to design a miniature butterfly garden for the school, deciding where plants could be grown and how they would care for them. This creatively extends the chapter's suggestion of developing greenery that attracts butterflies.
- (7) **Traffic Safety Design Studio:** Give students a real-life design challenge: “**How can we make our school gate safer?**” They can create innovative traffic signboards using simple words, drawings and symbols and explain the safety message behind their designs.
- (8) **Fire-Safety Simulation:** Turn fire-safety learning into a supervised simulation in which students practise finding the nearest exit, moving calmly, staying low in imaginary smoke and reaching the assembly point. Afterwards, students can sequence illustrated fire-safety cards in the correct order.
- (9) **“Choose the Better Behaviour” Interactive Theatre:** Present situations such as **pushing in a queue, littering, teasing or making excessive noise** and let students act out both an inappropriate and an improved response. Classmates then identify which behaviour makes the school happier and explain why.
- (10) **My Dream School Model:** Students can create a drawing, collage or simple model of their “**Dream Green and Happy School.**” They should incorporate ideas from the chapter such as water conservation, waste management, trees, safe traffic movement, fire safety and kindness.
- (11) **Happy School Survey:** Students can become young researchers by surveying **five students and one teacher**, as suggested in the chapter. They can organise the responses into a simple chart and identify the most common suggestions for making school happier.
- (12) **“One Change I Can Make” Innovation Wall:** Create a classroom display where every student contributes one achievable idea—such as **saving water, reducing waste, caring for a plant, helping a classmate or improving safety**. Students can periodically review which ideas have actually been put into practice, reinforcing the chapter's message that their actions can contribute to a happier school.

4.17: Practicing Questions/Question Bank:

A. Fill in the Blanks – 1 Mark Each:

1. A school that saves resources and cares for the environment can be called a _____ school.
Answer: green
2. The team that checks leaking taps is called the _____.
Answer: Water Watchers
3. _____ Savers observe whether lights and fans are being used carefully.
Answer: Electricity
4. The students who observe trees and plants are called _____.
Answer: Green Guardians
5. The _____ Warriors observe litter and dustbins in the school.
Answer: Waste
6. Food waste is generally classified as _____ waste.
Answer: wet

7. In the segregation activity, the _____ box is used for wet waste.
Answer: green
8. Old newspapers can be given to _____.
Answer: recyclers
9. A _____ roof reflects the Sun's heat and helps keep a building cooler.
Answer: white
10. A _____ surface absorbs more heat than a white surface.
Answer: black
11. Even a slowly dripping tap can waste a large amount of _____ over time.
Answer: water
12. Jal Shakti Abhiyan encourages people to collect _____ water.
Answer: rain
13. Trees provide _____ and help keep the surroundings cool.
Answer: shade
14. Traffic _____ help us use roads safely.
Answer: rules
15. During a fire, students should go to the _____ point after leaving the building.
Answer: assembly
16. If there is smoke during a fire, we should crawl _____.
Answer: low
17. We should never _____ a building after coming out safely during a fire.
Answer: re-enter/return
18. Waiting patiently for our _____ shows respect for others.
Answer: turn
19. Using _____ words helps make others feel respected.
Answer: kind
20. Saving water and managing waste can help make school a _____ place.
Answer: happy

B. One-Mark Descriptive Questions:

1. **What is a green school?**
Answer: A green school saves resources, manages waste and cares for trees and the environment.
2. **Who are Water Watchers?**
Answer: Water Watchers are students who observe water use, leaking taps, tanks and possible water wastage.
3. **What do Electricity Savers observe?**
Answer: They observe whether lights, fans and natural light are being used properly.

4. **What is waste segregation?**

Answer: Waste segregation is the process of separating waste into suitable categories such as wet, dry and recyclable waste.

5. **Why should old newspapers be kept separately?**

Answer: Old newspapers can be collected and given to recyclers.

6. **Why can a white roof help keep a building cool?**

Answer: A white roof reflects the Sun's heat.

7. **Why should a leaking tap be repaired?**

Answer: A leaking tap should be repaired because even a small leak can waste a large amount of water over time.

8. **What is one benefit of collecting rainwater?**

Answer: Collecting rainwater helps conserve water.

9. **Give one benefit of trees.**

Answer: Trees provide shade and help keep the surroundings cool.

10. **What should you do after leaving a building during a fire?**

Answer: We should go to the assembly point and stay with our group.

11. **Why should traffic rules be followed?**

Answer: Traffic rules should be followed to help prevent accidents and keep road users safe.

12. **How can you show respect while standing in a queue?**

Answer: We can show respect by patiently waiting for our turn.

C. Two-Mark Descriptive Questions:

1. **Mention two features of a green school.**

Answer:

1. A green school saves water and uses electricity carefully.
2. It manages waste properly and cares for trees.

2. **State two responsibilities of Water Watchers.**

Answer:

1. They check for leaking taps and water wastage.
2. They observe whether water tanks are clean and covered.

3. **How can we reduce waste in school?**

Answer:

1. We should use only what we need.
2. We should reuse useful things instead of throwing them away.

4. **Differentiate between the heating effect of white and black surfaces.**

Answer:

1. A white surface reflects more of the Sun's heat and remains relatively cooler.
2. A black surface absorbs more heat and becomes warmer.

5. Give two benefits of trees.

Answer:

1. Trees provide shade and help keep the surroundings cool.
2. They provide food and habitat for living beings such as birds and insects.

6. What should you do if there is smoke during a fire?

Answer:

1. We should crawl low under the smoke with our mouth covered.
2. We should move towards the nearest safe exit and not hide.

7. How can students improve traffic safety near their school?

Answer:

1. They can observe unsafe traffic practices near the school gate.
2. They can prepare clear safety signboards using simple words, drawings or symbols.

8. How can good behaviour make school happier?

Answer:

1. Waiting for our turn and respecting others creates a peaceful environment.
2. Kind words and helpful behaviour make people feel welcome.

D. Three-Mark Descriptive Questions:

1. Explain three ways to make a school greener.

Answer:

1. Save water by preventing leaks and using water carefully.
2. Save electricity by switching off unnecessary lights and fans.
3. Manage waste properly and plant more trees.

2. Explain the duties of Waste Warriors.

Answer:

1. They observe where litter is found around the school.
2. They check whether enough dustbins are available and being used.
3. They check whether food waste and other waste are separated properly.

3. How can a school building be kept naturally cooler?

Answer:

1. Trees can be planted around the building to provide shade.
2. Windows can allow natural breeze into classrooms.
3. Roofs can be painted white to reflect the Sun's heat.

4. Explain the dripping-tap investigation.

Answer:

1. Collect water from a dripping tap in a glass.
2. Measure the time required for the glass to fill.
3. Use the result to estimate how many glasses of water could be wasted in a day.

5. Explain three benefits of trees in a school campus.

Answer:

1. Trees help keep the air clean.
2. They provide shade and keep the surroundings cool.
3. They provide food and shelter for different living beings.

6. State three important fire-safety rules.

Answer:

1. Move calmly towards the nearest exit without panicking or running.
2. Crawl low under smoke with the mouth covered.
3. Go to the assembly point after leaving and never return inside.

7. How can students make their school a happier place?

Answer:

1. They can save water and electricity.
2. They can manage waste and care for plants and school surroundings.
3. They can show kindness, respect and helpfulness towards others.

E. Five-Mark Descriptive Questions:**1. Explain five ways to make your school a green school.**

Answer:

1. Reduce water wastage and repair leaking taps.
2. Use electricity carefully and switch off unused lights and fans.
3. Reduce, reuse and segregate waste properly.
4. Plant more trees and take care of existing plants.
5. Encourage students to participate actively in keeping the campus clean and green.

2. Explain how waste should be managed in school.**Answer:**

1. Students should use only what they need to reduce waste.
2. Useful materials should be reused whenever possible.
3. Wet and dry waste should be separated.
4. Newspapers and suitable recyclable items should be given to recyclers.
5. Correct segregation helps keep the surroundings cleaner and supports better waste management.

3. Describe five ways of conserving water in and around school.**Answer:**

1. Check the school regularly for leaking taps.
2. Repair leaks without unnecessary delay.
3. Close taps properly after use.
4. Collect rainwater wherever possible.
5. Encourage everyone to use water wisely.

4. Explain five important rules to follow during a fire emergency.**Answer:**

1. Remain calm and move towards the nearest exit.
2. Do not panic or run.
3. Crawl low with the mouth covered if there is smoke.
4. Never hide or return to the building after leaving it.
5. Reach the assembly point, stay with the group and report anyone missing or injured.

5. “Students can make their school a happy place.” Explain.**Answer:**

1. Students can conserve water and electricity.
2. They can segregate waste and keep the campus clean.
3. They can plant and care for trees and other plants.
4. They can follow traffic and fire-safety rules.
5. They can show kindness, respect and helpfulness towards everyone.

6. Your school wants to become cleaner, greener and safer. Suggest a five-point action plan.**Answer:**

1. Form student teams to inspect water, electricity, waste, greenery and traffic conditions.

2. Introduce proper waste segregation and recycling practices.
3. Prevent water and electricity wastage through regular observation.
4. Increase greenery and improve traffic and fire-safety awareness.
5. Encourage every student to take responsibility for cleanliness, kindness and respectful behaviour.



5th Standard World Around Us Book Chapter 5

Chapter 5: Our Vibrant Country

5.1 Summary of the Chapter:

Chapter 5: Our Vibrant Country — Summary:

- (1) **India is a land of diversity and unity.** People across the country speak different languages, follow different traditions, wear different clothes, eat different foods, and enjoy different forms of music and dance, yet they live together with a strong spirit of togetherness.
- (2) **Republic Day is celebrated on 26 January.** On this day, the National Flag is unfurled and the National Anthem is sung with pride. The saffron, white and green colours of the flag represent courage, peace and truth, and growth and prosperity respectively, while the Ashoka Chakra represents duty (*dharma*).
- (3) **Independence Day and Republic Day have special significance.** India became independent on **15 August 1947**, while the **Constitution of India came into effect on 26 January 1950**, which is why this day is celebrated as Republic Day.
- (4) **Indian currency notes tell us many things about our country.** They contain the image of Mahatma Gandhi, different languages, monuments, symbols and messages. The spectacles associated with Gandhi ji represent the **Swachh Bharat Abhiyan** and remind us of the importance of cleanliness.
- (5) **National symbols create a sense of pride and identity.** The National Emblem, with lions and the Ashoka Chakra, represents **strength, courage and confidence**. Other national symbols, such as the tiger and peacock, also represent India's natural and cultural heritage.
- (6) **India has great linguistic diversity.** More than a thousand languages are spoken across the country, and every language has its own rich history, songs and stories.
- (7) **Diversity makes India stronger.** Just as different plants, animals, birds and insects make a forest strong and beautiful, India's diverse people and cultures make the country stronger and more self-sufficient.
- (8) **Traditional clothing and headgear reflect India's cultural heritage.** For example, colourful *saafa* or *pagri* are worn in Rajasthan, while people in Himachal Pradesh wear a *topi*. Such headgear may indicate tradition, occupation, beliefs or regional identity.
- (9) **Music and dance add colour to Indian culture.** Different regions have their own musical instruments and dance forms. Instruments such as the **tabla, dhol, mridangam, sitar and shehnai** reflect India's varied musical traditions.
- (10) **India combines tradition with modern development.** Ancient practices such as **Ayurveda, yoga and meditation** continue alongside developments in science, technology, agriculture, transportation and digital payments. The chapter encourages every citizen to value India's diversity and **care for our rich and wonderful country**.

5.2 Important Formulas:

Important Formulas – Chapter 5: Our Vibrant Country:

The Chapter 5 is mainly **descriptive and activity-based**. It deals with India's national celebrations, Constitution, currency, national symbols, languages, cultural diversity, music, dance and unity. Therefore, **no specific mathematical or scientific formulas are given or required in the chapter**.

However, the following **simple quantitative relationships** may be useful for activity-based or applied questions:

No.	Quantitative Relationship	Formula / Method
1	Total value of currency notes	Total Value = Number of Notes $\times$ Denomination
2	Total money of different denominations	Total = (No. of ₹10 notes $\times$ 10) + (No. of ₹20 notes $\times$ 20) + ...
3	Difference between two amounts	Difference = Larger Amount – Smaller Amount
4	Number of years since Independence	Given Year – 1947
5	Number of years since India became a Republic	Given Year – 1950
6	Total number in different groups	Total = Sum of all groups
7	Fraction of students speaking a language	Fraction = Students speaking the language $\div$ Total students
8	Percentage of students in a group	Percentage = (Number in Group $\div$ Total Number) $\times$ 100
9	Difference in years between two events	Later Year – Earlier Year
10	Simple comparison	Difference = Greater Quantity – Smaller Quantity

The chapter specifically asks students to **observe currency denominations and monuments** and explore the **languages spoken by students**, so simple counting, addition and comparison can be incorporated into quantitative questions.

Conclusion: There are **no prescribed formulas in Chapter 5, “Our Vibrant Country.”** For a Grade 5 question bank, quantitative problems should therefore be limited to **simple currency calculations, counting, addition/subtraction, fractions/percentages where appropriate, and year-based calculations** rather than introducing unrelated formulas.

5.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)

LOTS – Fill in the Blanks with Answers:

- India celebrates _____ **Day** on 26 January.
Answer: Republic
- Our National Flag is also called the _____.
Answer: Tricolour
- The saffron colour in the National Flag stands for strength and _____.
Answer: courage
- The white band of the National Flag stands for peace and _____.
Answer: truth
- The green band of the National Flag stands for growth and _____.
Answer: prosperity
- The blue wheel at the centre of the National Flag is called the _____ **Chakra**.
Answer: Ashoka
- India became independent on _____ **August 1947**.
Answer: 15
- The Constitution of India came into effect on _____ **January 1950**.
Answer: 26

9. A country needs a set of _____ to run smoothly and keep everyone safe and happy.
Answer: rules
10. The special book of rules for our country is called the _____.
Answer: Constitution
11. The image of _____ **Gandhi** appears on Indian currency notes.
Answer: Mahatma
12. The spectacles printed on currency notes are a symbol of the _____ **Bharat Abhiyan**.
Answer: Swachh
13. Gandhi ji believed that everyone should keep their surroundings _____.
Answer: clean
14. The _____ **app** helps people with visual impairment identify different currency notes.
Answer: MANI
15. The National Emblem of India represents strength, courage and _____.
Answer: confidence
16. The lions in India are now found only in the _____ **forests of Gujarat**.
Answer: Gir
17. More than a _____ **languages** are spoken across India.
Answer: thousand
18. Every language has its own history, songs and _____.
Answer: stories
19. In Rajasthan, men wear a colourful _____ **or pagri**.
Answer: saafa
20. In Himachal Pradesh, people wear a _____ as traditional headgear.
Answer: topi
21. Road safety helmets are worn by motorcyclists and _____.
Answer: cyclists
22. Helmets help prevent serious _____ **injuries**.
Answer: head
23. The _____ is an instrument used in Carnatic music.
Answer: mridangam
24. The sitar and _____ are used in Hindustani music.
Answer: shehnai
25. India has a rich history, culture and practices such as Ayurveda, yoga and _____.
Answer: meditation
26. Scientists are launching _____, while farmers are using technology to grow better crops.
Answer: rockets
27. Modern changes are adding new _____ to India's traditions.
Answer: colours
28. As proud citizens, we should care for our rich and wonderful _____.
Answer: country
29. Diversity makes our country stronger and more _____.
Answer: self-sufficient
30. India is a shining example of the spirit of _____.
Answer: togetherness

5.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)**HOTS – Fill in the Blanks with Answers:**

1. If a country had no common rules, it would be difficult for it to function smoothly; therefore, India follows the _____.
Answer: Constitution
2. India became independent in 1947, but we celebrate Republic Day on 26 January because the Constitution came into effect in _____.
Answer: 1950
3. If a student wants to represent peace and truth using a colour from the National Flag, the student should choose _____.
Answer: white
4. A poster representing growth and prosperity using a colour of the National Flag should mainly use _____.
Answer: green
5. A student wishing to represent duty (*dharma*) through a symbol from the National Flag should draw the _____.
Answer: Ashoka Chakra
6. When students from different regions participate together in a Republic Day programme, they demonstrate pride and _____.
Answer: unity
7. Fighter jets, state tableaux and cultural programmes seen together in the Republic Day parade represent India's defence strength and cultural _____.
Answer: diversity
8. If you hold an Indian currency note up to the light, you may notice a smaller image of _____ that is not easily visible otherwise.
Answer: Mahatma Gandhi
9. A person noticing the spectacles symbol on a currency note can connect it with the national mission called _____.
Answer: Swachh Bharat Abhiyan
10. The spectacles were chosen for the cleanliness mission because Gandhi ji strongly believed in keeping our surroundings _____.
Answer: clean
11. Raised prints and symbols on currency notes demonstrate the importance of making things accessible to people with _____ **impairment**.
Answer: visual
12. A person who has difficulty identifying currency notes visually can use the _____ **app** for assistance.
Answer: MANI
13. If a school wants its emblem to communicate bravery and self-belief, the qualities of strength, courage and _____ represented by India's National Emblem can inspire it.
Answer: confidence
14. The recovery of lions from only a few dozen to several hundred shows the importance of wildlife _____.
Answer: conservation
15. A forest with many varieties of living things is stronger; similarly, India's _____ makes the country stronger and more self-sufficient.
Answer: diversity

16. Comparing India to a diverse forest helps us understand that differences can become a source of _____.
Answer: strength
17. Seeing a colourful *saafa* or *pagri* may suggest a connection with the state of _____.
Answer: Rajasthan
18. If someone is wearing a traditional *topi* described in the chapter, it may indicate a connection with _____ Pradesh.
Answer: Himachal
19. Although drums are found throughout India, their sounds and shapes differ because they are influenced by local culture, traditions and _____.
Answer: materials
20. If a musician performs Carnatic music using an instrument mentioned in the chapter, the instrument could be the _____.
Answer: mridangam
21. Learning words in several Indian languages can help students appreciate India's linguistic _____.
Answer: diversity
22. Although Indians speak different languages and follow different traditions, helping and supporting one another reflects the spirit of _____.
Answer: togetherness
23. Ayurveda, yoga and meditation represent India's rich traditions, while rockets and modern technology represent its exciting _____.
Answer: future
24. When farmers use technology to grow better crops, it shows how traditional occupations can benefit from modern _____.
Answer: technology
25. Faster trains and digital payments show that India is developing while continuing to value its old _____.
Answer: norms
26. Different languages, clothing and traditions are like different threads woven together to form one strong and vibrant _____.
Answer: fabric
27. If every region maintains its unique traditions while supporting other regions, India demonstrates _____ in diversity.
Answer: unity
28. A cultural fair where students learn about the dress, food, festivals, languages, dance and music of different states promotes appreciation of India's _____.
Answer: diversity
29. When students compare different states and identify both unique features and common values, they understand that diversity and _____ can exist together.
Answer: unity
30. Caring for India's culture, people and achievements is an important responsibility of every proud _____.
Answer: citizen

5.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

1. When do we celebrate Republic Day in India?

Answer: We celebrate Republic Day on 26 January every year.

2. **What does the saffron colour of the National Flag represent?**
Answer: The saffron colour represents **strength and courage**.
3. **What does the white band of the National Flag represent?**
Answer: The white band represents **peace and truth**.
4. **What does the green band of the National Flag represent?**
Answer: The green band represents **growth and prosperity**.
5. **What does the Ashoka Chakra in the National Flag represent?**
Answer: The Ashoka Chakra represents **duty (dharma)**.
6. **When did India become independent?**
Answer: India became independent on **15 August 1947**.
7. **Why do we celebrate Republic Day on 26 January?**
Answer: We celebrate Republic Day because India began following its **Constitution on 26 January 1950**.
8. **What is the Constitution?**
Answer: The Constitution is a **special book containing the rules for governing our country**.
9. **Whose image appears on Indian currency notes?**
Answer: The image of **Mahatma Gandhi** appears on Indian currency notes.
10. **What do the spectacles on Indian currency notes represent?**
Answer: The spectacles represent the **Swachh Bharat Abhiyan (Clean India Mission)**.
11. **What did Gandhi ji emphasise about our surroundings?**
Answer: Gandhi ji emphasised that everyone should **keep their surroundings clean**.
12. **What is the purpose of the MANI app?**
Answer: The MANI app helps people with **visual impairment identify different currency notes**.
13. **What does the National Emblem of India represent?**
Answer: The National Emblem represents **strength, courage and confidence**.
14. **Where are lions found in India today according to the chapter?**
Answer: Lions are found in the **Gir forests of Gujarat**.
15. **How many languages are spoken across India according to the chapter?**
Answer: **More than a thousand languages** are spoken across India.
16. **What makes each Indian language rich?**
Answer: Each Indian language is rich with its own **history, songs and stories**.
17. **What traditional headgear is worn by men in Rajasthan?**
Answer: Men in Rajasthan wear a colourful **saafa or pagri**.
18. **What traditional headgear is mentioned for Himachal Pradesh?**
Answer: People in Himachal Pradesh wear a **topi**.
19. **Why are road safety helmets worn?**
Answer: Road safety helmets are worn to **help prevent serious head injuries**.
20. **Name any two Indian drums mentioned in the chapter.**
Answer: **Tabla and dhol** are two Indian drums mentioned in the chapter.
21. **Which musical instrument mentioned in the chapter is used in Carnatic music?**
Answer: The **mridangam** is used in Carnatic music.
22. **Name two instruments mentioned in connection with Hindustani music.**
Answer: **Sitar and shehnai** are mentioned in connection with Hindustani music.
23. **What are music and dance used for in Indian culture?**
Answer: Music and dance are used for **celebrating, praying, sharing stories and bringing people together**.

24. **How does diversity help our country?**

Answer: Diversity makes our country **stronger and more self-sufficient**.

25. **What is meant by the spirit of togetherness?**

Answer: The spirit of togetherness means **living together while helping and supporting one another**.

26. **Name three traditional Indian practices mentioned in the chapter.**

Answer: **Ayurveda, yoga and meditation** are three traditional Indian practices mentioned in the chapter.

27. **How are farmers using technology according to the chapter?**

Answer: Farmers are using technology to **grow better crops**.

28. **What are scientists doing as an example of modern India's progress?**

Answer: Scientists are **launching rockets**.

29. **How do modern developments affect India's old norms?**

Answer: Modern developments are **adding new colours to the old norms rather than replacing them**.

30. **What should we do as proud citizens of India?**

Answer: As proud citizens, we should **do our best to care for our rich and wonderful country**.

5.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – HOTS Type:

1. **Why is the Constitution important for a country?**

Answer: The Constitution provides rules that help a country run smoothly and keep its people safe and happy.

2. **How does singing the National Anthem together on Republic Day promote unity?**

Answer: Singing the National Anthem together creates a shared feeling of pride and belonging among citizens.

3. **If you want to represent peace in a drawing of the National Flag, which colour would you highlight and why?**

Answer: I would highlight white because it represents peace and truth.

4. **Why can the Ashoka Chakra be considered a reminder of responsibility?**

Answer: The Ashoka Chakra can remind us of responsibility because it represents duty or *dharma*.

5. **How does a Republic Day tableau help us understand India's diversity?**

Answer: A tableau displays the distinctive culture and traditions of different states and helps us appreciate India's diversity.

6. **Why is Independence Day different from Republic Day?**

Answer: Independence Day marks India's freedom, while Republic Day marks the day India began following its Constitution.

7. **What can you learn about India by carefully observing a currency note?**

Answer: A currency note can help us discover India's languages, monuments, symbols and national messages.

8. **How does the spectacles symbol on currency notes encourage responsible citizenship?**

Answer: The spectacles represent Swachh Bharat Abhiyan and encourage citizens to keep their surroundings clean.

9. **How do special features on currency notes promote inclusion?**

Answer: Raised prints and symbols help people with visual impairment identify different currency notes.

10. Why can the National Emblem inspire confidence among citizens?

Answer: The National Emblem can inspire confidence because it represents strength, courage and confidence.

11. What does the increase in the number of lions in India teach us?

Answer: The increase in lion numbers shows that dedicated efforts can help protect and conserve wildlife.

12. How can learning a word in different Indian languages help students?

Answer: Learning the same word in different languages helps students understand and appreciate India's linguistic diversity.

13. Why is a forest used as an example to explain India's diversity?

Answer: A forest shows that many different living things together can make a system stronger and more beautiful.

14. How does diversity make India stronger?

Answer: Diversity brings together different strengths, traditions and ways of life, making India stronger and more self-sufficient.

15. What can traditional headgear tell us about a person?

Answer: Traditional headgear can indicate a person's region, beliefs, occupation or cultural heritage.

16. Why should a motorcyclist wear a helmet even for a short journey?

Answer: A motorcyclist should wear a helmet because it can help prevent serious head injuries in an accident.

17. Why do drums from different regions of India look and sound different?

Answer: Drums differ because their design and sound are shaped by local culture, traditions and materials.

18. How do music and dance help bring people together?

Answer: Music and dance bring people together through shared celebrations, prayers, stories and cultural experiences.

19. What can students learn by locating different dance forms on a map of India?

Answer: Students can understand how different dance traditions are connected with different states of India.

20. Why is India compared to a colourful fabric made of different threads?

Answer: India is compared to a colourful fabric because its different cultures and traditions are woven together by a spirit of togetherness.

21. How can people with different languages and traditions still maintain national unity?

Answer: People can maintain national unity by living together and helping and supporting one another.

22. How does the chapter show that tradition and modern technology can exist together?

Answer: India preserves practices such as Ayurveda, yoga and meditation while also advancing in science, farming and technology.

23. What does the use of technology by farmers tell us about modern India?

Answer: It shows that technology can support traditional occupations by helping farmers grow better crops.

24. Why should students learn about the cultures of different Indian states?

Answer: Learning about different states helps students appreciate both their unique features and the common values that unite them.

25. How can a classroom cultural fair promote national integration?

Answer: A cultural fair allows students to explore different states and recognise both India's diversity and its shared values.

26. Why should citizens care for India's cultural richness?

Answer: Citizens should care for India's cultural richness because it forms an important part of the country's shared heritage and identity.

27. If all regions of India had exactly the same traditions, what important feature highlighted in the chapter would be reduced?

Answer: India's rich cultural diversity would be reduced if every region followed exactly the same traditions.

28. How can multilingualism become a strength rather than a difficulty?

Answer: Multilingualism becomes a strength when people learn about and respect one another's languages and cultures.

29. Why is supporting people from different backgrounds important for India's togetherness?

Answer: Supporting one another strengthens the bonds that unite people despite differences in language, religion, clothing and traditions.

30. What is one responsibility you can infer for a proud citizen from this chapter?

Answer: A proud citizen should respect India's diversity and do their best to care for the country.

5.7 Two-mark questions with Answers of LOTS Type: (25 Questions)**Two-Mark Descriptive Questions with Answers – LOTS Type:****1. What do the saffron and white colours of the National Flag represent?**

Answer:

1. The saffron colour represents **strength and courage**.
2. The white colour represents **peace and truth**.

2. What do the green colour and Ashoka Chakra of the National Flag represent?

Answer:

1. The green colour represents **growth and prosperity**.
2. The Ashoka Chakra represents **duty (dharma)**.

3. Write two points about India's Independence Day.

Answer:

1. India became independent on **15 August 1947**.
2. We celebrate Independence Day every year to remember our freedom and the contributions of those who struggled for it.

4. Why do we celebrate Republic Day on 26 January?

Answer:

1. India began following its Constitution on **26 January 1950**.
2. Therefore, 26 January is celebrated as **Republic Day** every year.

5. Why does a country need rules?

Answer:

1. A country needs rules to **run smoothly**.
2. Rules also help to keep everyone **safe and happy**.

6. Mention any two things seen during the Republic Day parade in New Delhi.

Answer:

1. **Fighter jets and state tableaux** are seen during the parade.
2. **Cultural programmes and Indian Defence Forces** are also featured.

7. Mention any two things that can be observed on an Indian currency note.

Answer:

1. We can observe the **languages and monument** shown on the note.
2. We can also observe various **symbols and messages** printed on it.

8. What do the spectacles printed on currency notes represent?**Answer:**

1. The spectacles are the symbol of the **Swachh Bharat Abhiyan (Clean India Mission)**.
2. The symbol is based on the spectacles of **Gandhi ji**.

9. How do Indian currency notes help people with visual impairment?**Answer:**

1. Some currency notes have **raised prints and symbols** for identification.
2. The **MANI app** also helps people with visual impairment identify different currency notes.

10. What does the National Emblem of India represent?**Answer:**

1. The National Emblem represents **strength, courage and confidence**.
2. The **Ashoka Chakra** can also be seen below the lions.

11. Write two points about the lions found in India.**Answer:**

1. Today, these lions are found only in the **Gir forests of Gujarat**.
2. Their population has increased from only a few dozen about 150 years ago to **several hundred lions in the wild**.

12. Write two points about the languages spoken in India.**Answer:**

1. **More than a thousand languages** are spoken across India.
2. Each language is rich with its own **history, songs and stories**.

13. How are food, clothes, songs and dances different across India?**Answer:**

1. People across India speak different languages and eat foods and wear clothes special to their areas.
2. They also enjoy **songs and dances** that are unique to their regions.

14. Why is a forest described as diverse?**Answer:**

1. A forest contains many varieties of **plants, trees, animals, birds and insects**.
2. These different living things help the forest become **stronger and more beautiful**.

15. Write two points about traditional headgear in India.**Answer:**

1. Men in Rajasthan wear a colourful **saafa or pagri**, while people in Himachal Pradesh wear a **topi**.
2. Headgear is an important symbol of **tradition, honour and cultural heritage**.

16. Why are road safety helmets important?**Answer:**

1. Road safety helmets are worn by **motorcyclists and cyclists**.
2. They help prevent **serious head injuries**.

17. What are the different purposes of music and dance in India?**Answer:**

1. Music and dance are ways of **celebrating and praying**.
2. They are also used for **sharing stories and bringing people together**.

18. Name some drums mentioned in the chapter.**Answer:**

1. **Nagara, tabla, thavil, idakka, khol and dhol** are some drums mentioned in the chapter.
2. **Mridangam, dholak, pakhawaj, dhama and khanjira** are other examples.

19. Name musical instruments associated with Carnatic and Hindustani music in the chapter.

Answer:

1. The **mridangam** is mentioned in connection with Carnatic music.
2. The **sitar and shehnai** are mentioned in connection with Hindustani music.

20. What is meant by the "Spirit of Togetherness" in India?

Answer:

1. India has a rich variety of **languages, religions, clothing and traditions**.
2. Despite these differences, people **live together, helping and supporting each other**.

21. Mention two examples showing the connection between India's traditions and its future.

Answer:

1. India has traditional practices such as **Ayurveda, yoga and meditation**.
2. At the same time, scientists launch rockets and farmers use **technology to grow better crops**.

22. How does the chapter describe India's progress?

Answer:

1. Faster trains are helping people **travel quicker** and digital payments are making life easier.
2. These developments are adding **new colours to India's old norms**.

23. What should we do as proud citizens of India?

Answer:

1. We should appreciate India's **richness and diversity**.
2. We should do our best to **care for our rich and wonderful country**.

24. What should students explore while studying an Indian state in the cultural fair?

Answer:

1. Students should explore the state's **traditional dress, popular food, festivals and languages**.
2. They should also learn about its **dance or music**.

25. What can students learn from a classroom cultural fair?

Answer:

1. Students can learn about the **unique features of different Indian states**.
2. They can also identify the **similarities and common values** shared among them.

5.8. Two-mark questions with Answers of HOTS Type: (25 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. Why does India need a Constitution even after becoming independent?

Answer:

1. Independence gave India freedom to make its own decisions.
2. The Constitution provides rules to help the country run smoothly and keep everyone safe and happy.

2. How can Republic Day celebrations develop unity among students?

Answer:

1. Students gather together to unfurl the National Flag and sing the National Anthem with pride.
2. Such shared celebrations develop a feeling of **unity and belonging** among students.

3. If you were designing a symbol for peace and prosperity, which two colours of the National Flag would you choose? Why?

Answer:

1. I would choose **white** because it represents peace and truth.
2. I would choose **green** because it represents growth and prosperity.

4. What would happen if a country did not have rules?

Answer:

1. Without rules, it would be difficult for a country to run smoothly.
2. Rules are necessary to maintain safety, happiness and orderly functioning.

5. How does a Republic Day tableau help students understand India's diversity?

Answer:

1. A tableau can display the special culture, traditions and features of a particular state.
2. Observing tableaux helps students appreciate the variety found across India.

6. How can studying an Indian currency note increase your knowledge about India?

Answer:

1. A currency note allows us to observe different **languages, monuments, symbols and messages**.
2. These features help us learn about India's cultural and national identity.

7. Why is Gandhi ji's spectacles symbol suitable for the Swachh Bharat Abhiyan?

Answer:

1. Gandhi ji was very particular that everyone should keep their surroundings clean.
2. Therefore, his spectacles appropriately remind people about the importance of cleanliness.

8. How do special features of currency notes show concern for people with visual impairment?

Answer:

1. Some notes have **raised prints and symbols** that help people with visual impairment identify them.
2. The **MANI app** further helps them recognise different currency notes.

9. What lesson can we learn from India's efforts to protect lions?

Answer:

1. The number of lions increased from only a few dozen to several hundred because of conservation efforts.
2. This shows that determined efforts can help protect endangered wildlife.

10. Why does learning different Indian languages help us appreciate our country?

Answer:

1. Each language has its own rich history, songs and stories.
2. Learning different languages helps us understand and respect India's linguistic diversity.

11. How is India's diversity similar to the diversity of a forest?

Answer:

1. A forest becomes stronger and more beautiful because it contains many varieties of living things.
2. Similarly, India's diversity makes the country **stronger and more self-sufficient**.

12. What can you understand about a person by observing traditional headgear?

Answer:

1. Headgear may indicate **where a person is from, what they believe in or what they do for a living**.
2. It can also represent tradition, honour and cultural heritage.

13. Why might drums from two different regions of India sound different?

Answer:

1. Each drum has its own rhythm and sound based on its region.
2. Its features are shaped by the **local culture, traditions and materials**.

14. How can music and dance strengthen togetherness among people?**Answer:**

1. Music and dance allow people to celebrate, pray and share stories together.
2. Such shared cultural experiences help **bring people together**.

15. Why is India compared to a strong, vibrant fabric made of different threads?**Answer:**

1. India's different regions, languages, religions, clothing and traditions are like different threads.
2. Together, these differences form one strong and vibrant country united by the **spirit of togetherness**.

16. How can people maintain unity even when they have different languages and traditions?**Answer:**

1. People can respect one another's languages, religions, clothing and traditions.
2. They can maintain unity by **living together and helping and supporting each other**.

17. How does modern India balance tradition and technological progress?**Answer:**

1. India continues practices such as **Ayurveda, yoga and meditation**.
2. At the same time, scientists launch rockets and farmers use technology to grow better crops.

18. Why can technology be useful to farmers?**Answer:**

1. Technology can help farmers improve the way they cultivate crops.
2. The chapter explains that farmers are using technology to **grow better crops**.

19. How can a cultural fair help students appreciate India's diversity?**Answer:**

1. Students can explore the traditional dress, food, festivals, languages, dance and music of different states.
2. By visiting different state booths, they can learn about both the **unique features and common values** of India's states.

20. Why should India's diversity be considered a strength rather than a weakness?**Answer:**

1. Different languages, traditions and cultural practices enrich the country in many ways.
2. Like diversity in a forest, India's diversity makes the country **stronger and more self-sufficient**.

21. If you were asked to design an emblem for your school, what should you consider?**Answer:**

1. I would first decide the **message or values** that the school emblem should communicate.
2. I would then select suitable **symbols, words, shapes and colours** to express that message.

22. Why is it important for citizens to preserve India's traditions while accepting modern developments?**Answer:**

1. India's traditions form an important part of its rich cultural heritage.
2. Modern developments can improve people's lives while adding **new colours to old norms**.

23. How does learning about different dance forms improve a student's understanding of India?**Answer:**

1. Different dance forms have originated in different states of India.
2. Identifying their states of origin helps students understand India's **regional and cultural variety**.

24. Why should students identify similarities as well as differences among Indian states?

Answer:

1. Differences help students appreciate the **unique features** of each state.
2. Similarities help them recognise the **common values** that connect people across India.

25. What responsibility does the chapter suggest for a proud citizen of India?

Answer:

1. A proud citizen should appreciate India's rich traditions, diversity and progress.
2. Every citizen should do their best to **care for our rich and wonderful country**.

5.9. Three-mark questions with Answers of LOTS Type: (20 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type

1. Describe the significance of the three colours of the Indian National Flag.

Answer:

1. The **saffron** colour represents strength and courage.
2. The **white** colour represents peace and truth.
3. The **green** colour represents growth and prosperity.

2. Describe how Republic Day is celebrated at the school mentioned in the chapter.

Answer:

1. The students gather around the decorated flagpole in lines.
2. The head teacher unfurls the Tricolour to the rhythm of drums and claps.
3. Everyone sings the National Anthem together with pride and unity.

3. Write three points about India's Independence and Republic Day.

Answer:

1. India became independent on **15 August 1947**.
2. The Constitution of India came into effect on **26 January 1950**.
3. Therefore, 15 August is celebrated as Independence Day and 26 January as Republic Day.

4. What are some important features of the Republic Day parade in New Delhi?

Answer:

1. Fighter jets fly in the sky during the Republic Day parade.
2. State tableaux and colourful cultural programmes are presented.
3. The parade also features the Army, Navy, Air Force, paramilitary and other forces.

5. What information can we discover by observing an Indian currency note?

Answer:

1. We can observe its **value, colour and different languages**.
2. We can identify the **monument, symbols and images of animals** shown on it.
3. We can also find messages and other special features printed on the note.

6. Explain the connection between Gandhi ji, cleanliness and Indian currency notes.

Answer:

1. The tiny spectacles seen on currency notes are the symbol of **Swachh Bharat Abhiyan**.
2. The symbol is based on the spectacles of Gandhi ji.
3. Gandhi ji believed strongly that everyone should keep their surroundings clean.

7. How are Indian currency notes made accessible to people with visual impairment?

Answer:

1. Some Indian currency notes contain **raised prints and symbols**.
2. These features help people with visual impairment identify the notes.

3. The **MANI app** also helps them identify different currency notes.

8. Write three points about the National Emblem of India.

Answer:

1. The National Emblem shows lions standing on a circular platform.
2. It represents **strength, courage and confidence**.
3. The **Ashoka Chakra** can also be seen below the lions.

9. What does the chapter tell us about languages in India?

Answer:

1. More than a thousand languages are spoken across India.
2. Each language has its own rich history, songs and stories.
3. People can use translation applications to learn and understand different languages.

10. Explain the diversity found in a forest.

Answer:

1. A forest has many varieties of plants, trees, animals, birds and insects.
2. These different living things help the forest look after itself.
3. Their diversity helps the forest become stronger and more beautiful.

11. Write three points about traditional headgear in India.

Answer:

1. Men in Rajasthan wear a colourful **saafa or pagri**, while people in Himachal Pradesh wear a **topi**.
2. Headgear can indicate where a person is from, what they believe in or what they do for a living.
3. It is an important symbol of tradition, honour and cultural heritage.

12. What does the chapter say about road safety helmets?

Answer:

1. Road safety helmets are worn by motorcyclists and cyclists.
2. They are designed to protect the head during accidents.
3. They help prevent serious head injuries.

13. Describe the importance of music and dance in Indian culture.

Answer:

1. Music and dance are important art forms of vibrant India.
2. They are used for celebrating, praying and sharing stories.
3. They also help in bringing people together.

14. Name and describe some musical instruments mentioned in the chapter.

Answer:

1. Indian drums include **tabla, dhol, thavil, idakka, khol and dholak**.
2. The **mridangam** is used in Carnatic music.
3. The **sitar and shehnai** are used in Hindustani music.

15. Explain the spirit of togetherness found in India.

Answer:

1. India has a rich variety of languages, religions, clothing and traditions.
2. People live together while helping and supporting one another.
3. These different cultural threads together form one strong and vibrant country.

16. Write three points showing how India combines tradition with modern progress.

Answer:

1. India has traditional practices such as **Ayurveda, yoga and meditation**.
2. Scientists are launching rockets and farmers are using technology to grow better crops.
3. Children are learning science and technology along with dance and music.

17. How does the chapter explain that diversity makes India stronger?

Answer:

1. A forest becomes stronger because it contains many varieties of living things.
2. In the same way, India contains diverse people, languages, traditions and cultures.
3. The chapter states that diversity makes India **stronger and more self-sufficient**.

18. What activities are suggested for a classroom cultural fair?

Answer:

1. Students are divided into groups and each group is assigned a different Indian state.
2. Each group explores its state's dress, food, festivals, languages, dance and music.
3. Students prepare state booths and visit other booths to learn about different states.

19. What should students discuss after conducting the cultural fair?

Answer:

1. Students should discuss the **unique features** they discovered in each state.
2. They should identify the **similarities** among different states.
3. They should also identify the **common values** shared by the states.

20. What message does the chapter give about being a proud citizen of India?

Answer:

1. India has a rich heritage as well as an exciting future.
2. Modern developments are adding new colours to India's old norms.
3. Every citizen should do their best to **care for our rich and wonderful country**.

5.10. Three-mark questions with Answers of HOTS Type: (20 Questions)

Three-Mark Descriptive Questions with Answers – HOTS Type:

1. Why does a country need a Constitution even after becoming independent?

Answer:

1. Independence gives a country the freedom to make its own decisions.
2. A country still needs rules to run smoothly and keep everyone safe and happy.
3. Therefore, the Constitution provides a common set of rules for governing the country.

2. How can Republic Day celebrations help develop national unity among students?

Answer:

1. Students gather together around the National Flag irrespective of their differences.
2. They sing the National Anthem together with pride and unity.
3. Such shared celebrations strengthen their sense of belonging to one country.

3. If you were designing a poster on India's values using the colours of the National Flag, how would you use them?

Answer:

1. I would use **saffron** to represent strength and courage.
2. I would use **white** to represent peace and truth.
3. I would use **green** to represent growth and prosperity.

4. How can state tableaux in the Republic Day parade help people understand India better?

Answer:

1. State tableaux can display the distinctive features of different parts of India.
2. They allow people to observe India's varied cultural traditions together in one celebration.
3. Thus, they help people appreciate the country's diversity and togetherness.

5. How can an ordinary currency note become a learning resource about India?

Answer:

1. A currency note contains different languages, monuments, symbols and messages.
2. Observing these features helps students discover India's cultural and national identity.
3. Therefore, even an everyday object can be used to explore India's diversity.

6. Why is Gandhi ji's spectacles symbol appropriate for the Swachh Bharat Abhiyan?**Answer:**

1. Gandhi ji believed strongly in keeping one's surroundings clean.
2. People living in his ashram followed strict rules of cleanliness.
3. Therefore, his spectacles serve as a meaningful symbol for a nationwide cleanliness mission.

7. How do the special features of currency notes promote inclusion?**Answer:**

1. Some currency notes have raised prints and symbols for people with visual impairment.
2. The MANI app also helps them identify different currency notes.
3. These features make currency identification more accessible to people with different needs.

8. What lesson can we learn from India's efforts to protect lions?**Answer:**

1. The number of lions had fallen to only a few dozen about 150 years ago.
2. Conservation efforts helped their population increase to several hundred in the wild.
3. This shows that sustained efforts can help protect and restore wildlife.

9. Why does the chapter compare India's diversity with a forest?**Answer:**

1. A forest contains many different plants, animals, birds and insects.
2. These different living things together make the forest stronger and more beautiful.
3. Similarly, diversity makes India stronger and more self-sufficient.

10. How can traditional headgear help us understand India's cultural diversity?**Answer:**

1. Different regions have distinctive headgear, such as the *saafa* or *pagri* of Rajasthan and the *topi* of Himachal Pradesh.
2. Headgear can indicate a person's region, beliefs or occupation.
3. It therefore reflects tradition, honour and cultural heritage.

11. Why do musical instruments such as drums differ from one region of India to another?**Answer:**

1. Different regions have their own cultural traditions and musical practices.
2. The shape, rhythm and sound of a drum are influenced by local culture, traditions and materials.
3. Hence, regional instruments demonstrate the diversity of Indian culture.

12. How do music and dance contribute to the spirit of togetherness?**Answer:**

1. Music and dance provide ways for people to celebrate and pray together.
2. They are also used to share stories and cultural traditions.
3. These shared experiences help bring people together.

13. How can learning different Indian languages promote respect for diversity?**Answer:**

1. India has more than a thousand languages, each with its own history, songs and stories.
2. Learning words from different languages helps students experience this linguistic variety.
3. Such learning can encourage appreciation and respect for India's diverse cultures.

14. How does India show that diversity and unity can exist together?**Answer:**

1. Indians have different languages, religions, clothing and traditions.
2. Despite these differences, people live together and help and support one another.
3. These diverse cultural threads together form one strong and vibrant nation.

15. How does the chapter show that India can preserve tradition while embracing modern progress?

Answer:

1. India continues traditional practices such as Ayurveda, yoga and meditation.
2. At the same time, scientists launch rockets and farmers use technology to grow better crops.
3. This shows that traditional knowledge and modern development can progress together.

16. Why can a classroom cultural fair be an effective way of learning about India?

Answer:

1. Students can research the dress, food, festivals, languages, dance and music of different states.
2. Visiting different state booths allows them to learn from one another.
3. They can compare unique features as well as common values among the states.

17. If people speak different languages, how can they still maintain the spirit of togetherness?

Answer:

1. People can respect the languages and traditions followed by others.
2. They can live together while helping and supporting one another.
3. Such mutual respect and cooperation allow diversity and togetherness to coexist.

18. Why should students identify both similarities and differences among Indian states?

Answer:

1. Differences help students recognise the unique features of each state.
2. Similarities help them discover values and practices that people may share.
3. Studying both helps students understand India's richness as well as its togetherness.

19. How can technological development strengthen India without reducing its cultural richness?

Answer:

1. Technology can improve farming, transportation, payments and other aspects of life.
2. At the same time, people can continue practising and valuing India's traditional culture.
3. Thus, modern developments can add new colours to India's old norms rather than simply replacing them.

20. What can a Grade 5 student do to contribute to the idea of a vibrant and united India?

Answer:

1. A student can respect different languages, traditions and cultural practices.
2. The student can practise cleanliness and participate positively in shared national and cultural activities.
3. By appreciating diversity and caring for the country, the student can contribute to the spirit of togetherness.

5.11 Five-mark questions with Answers of LOTS Type: (12 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type:

1. Describe the Indian National Flag and explain the meaning of its colours and the Ashoka Chakra.

Answer:

1. The Indian National Flag has three horizontal bands of **saffron, white and green**.
2. The saffron colour at the top represents **strength and courage**.
3. The white band in the middle represents **peace and truth**.
4. The green band at the bottom represents **growth and prosperity**.
5. The blue **Ashoka Chakra** at the centre represents **duty (dharma)**.

2. Explain the significance of Independence Day and Republic Day in India.**Answer:**

1. India became independent on **15 August 1947**.
2. Many brave people struggled hard to make India free.
3. A country needs rules to run smoothly and keep everyone safe and happy.
4. India began following its Constitution on **26 January 1950**.
5. Therefore, we celebrate **Independence Day on 15 August** and **Republic Day on 26 January** every year.

3. Describe the important features that can be observed on Indian currency notes.**Answer:**

1. We can observe the **value and colour** of an Indian currency note.
2. Currency notes contain different **languages** used in India.
3. They may show **monuments, symbols and images of animals**.
4. The spectacles symbol represents the **Swachh Bharat Abhiyan** and is based on Gandhi ji's spectacles.
5. Some notes also have **raised prints and symbols** to help people with visual impairment identify them.

4. Explain the linguistic and cultural diversity of India.**Answer:**

1. More than a **thousand languages** are spoken across India.
2. Each language has its own rich **history, songs and stories**.
3. People in different regions eat foods and wear clothes that are special to their areas.
4. Different regions also have their own **songs, dances and cultural traditions**.
5. This rich variety of languages and ways of life makes India a vibrant and diverse country.

5. Explain how the chapter compares the diversity of India with a forest.**Answer:**

1. A forest contains many varieties of **plants, trees, animals, birds and insects**.
2. These different living things help the forest look after itself.
3. Their variety also helps the forest become **stronger and more beautiful**.
4. India similarly has a great variety of people, languages and cultural traditions.
5. Therefore, the chapter explains that **diversity makes our country stronger and more self-sufficient**.

6. Describe the importance and variety of traditional headgear in India.**Answer:**

1. India has many different types of traditional headgear.
2. In Rajasthan, men wear a colourful **saafa or pagri**.
3. In Himachal Pradesh, people wear a **topi**.
4. Headgear can tell us where someone is from, what they believe in or what they do for a living.
5. It is an important symbol of **tradition, honour and cultural heritage**, especially during weddings and formal occasions.

7. Describe the importance and variety of music and musical instruments in India.**Answer:**

1. Music and dance are important art forms of vibrant India.
2. They are used for **celebrating, praying, sharing stories and bringing people together**.
3. Different parts of India have different drums such as **tabla, dhol, thavil, idakka and mridangam**.

4. The **mridangam** is used in Carnatic music, while the **sitar and shehnai** are used in Hindustani music.
5. The rhythm and sound of instruments are shaped by the **local culture, traditions and materials**.

8. Explain the “Spirit of Togetherness” in India.

Answer:

1. India has a rich variety of **languages, religions, clothing and traditions**.
2. People with these different backgrounds live together.
3. They **help and support one another** despite their differences.
4. Each region is like a different thread woven into one strong and vibrant fabric.
5. Thus, India's diversity is united by a strong **spirit of togetherness**.

9. Describe how India combines its rich traditions with modern development.

Answer:

1. India has rich traditional practices such as **Ayurveda, yoga and meditation**.
2. At the same time, scientists are **launching rockets**.
3. Farmers are using **technology to grow better crops**.
4. Children are learning science and technology along with **dance and music**.
5. These developments show that India is moving towards an exciting future while continuing to value its traditions.

10. Describe the Cultural Fair project suggested in the chapter.

Answer:

1. The class is divided into groups, and each group is assigned a **different state of India**.
2. Each group explores its state's **traditional dress, popular food, festivals, languages, dance or music**.
3. Students may prepare **posters, cut-outs and other displays** about their assigned state.
4. Each group sets up a state booth, and students visit the other booths to learn about different states.
5. After the fair, students discuss the **unique features, similarities and common values** they discovered among the states.

5.12 Five-mark questions with Answers of HOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. “India’s diversity is its strength.” Justify this statement using ideas from the chapter.

Answer:

1. India has a rich variety of languages, religions, clothing, food and traditions.
2. Like a forest with many varieties of living things, diversity can make a system stronger and more beautiful.
3. People from different backgrounds live together and help and support one another.
4. Different regions are like colourful threads woven together into one strong fabric.
5. Therefore, India’s diversity strengthens the country while promoting a spirit of togetherness.

2. Imagine that a country has freedom but no Constitution or common rules. What problems might arise? Explain.

Answer:

1. People may not know what rules they are expected to follow.
2. It may become difficult to maintain order and run the country smoothly.
3. The safety and happiness of citizens may be affected.
4. Common rules provide guidance for how a country should function.

5. Therefore, the Constitution is essential because it provides a set of rules for governing the country.

3. How can the National Flag teach students important values for everyday life?

Answer:

1. The saffron colour can inspire students to show **strength and courage** when facing difficulties.
2. The white colour can encourage them to practise **peace and truth**.
3. The green colour can remind them to work towards **growth and prosperity**.
4. The Ashoka Chakra can encourage them to perform their **duty (dharma)** sincerely.
5. Thus, the values represented by the National Flag can guide students towards responsible behaviour.

4. How can an Indian currency note be used as a learning resource about the country?

Answer:

1. Students can observe the different **languages** printed on the currency note.
2. They can identify the **monuments, animals and symbols** shown on it.
3. The spectacles symbol can lead them to learn about the **Swachh Bharat Abhiyan** and Gandhi ji's emphasis on cleanliness.
4. Raised prints and symbols can help them understand how currency is made accessible to people with visual impairment.
5. Thus, a simple currency note can teach students about India's culture, heritage, national initiatives and inclusion.

5. What lesson does the recovery of lions in India teach us about protecting wildlife?

Answer:

1. The number of lions had fallen to only a few dozen about 150 years ago.
2. India made significant efforts to save these lions.
3. As a result, their population increased to several hundred in the wild.
4. This shows that continuous efforts can help protect threatened wildlife.
5. Therefore, people should value and support efforts to conserve animals and their habitats.

6. Suppose your class has students who speak many different languages. How can this diversity become a learning opportunity?

Answer:

1. Students can identify and share the different languages spoken in their class.
2. They can learn how the same word is spoken in different languages.
3. They can discover that every language has its own history, songs and stories.
4. Such activities can encourage students to appreciate linguistic differences rather than see them as barriers.
5. In this way, classroom diversity can help students understand and value India's multilingual character.

7. Compare a diverse forest with a diverse country and explain what we can learn from the comparison.

Answer:

1. A forest contains many kinds of plants, trees, animals, birds and insects.
2. These different living things help the forest look after itself and become stronger.
3. Similarly, India contains people with many different languages, customs and cultural practices.
4. These differences contribute to the richness and strength of the country.
5. Hence, just as diversity benefits a forest, diversity makes India **stronger and more self-sufficient**.

8. How can music and dance help strengthen unity while preserving India's regional diversity?**Answer:**

1. Different regions of India have their own music, dance forms and musical instruments.
2. Even drums differ in their rhythm and sound according to local culture, traditions and materials.
3. These differences preserve the unique cultural identity of different regions.
4. At the same time, music and dance allow people to celebrate, pray and share stories together.
5. Therefore, regional art forms preserve diversity while also **bringing people together**.

9. How does the chapter show that India can progress without giving up its traditions?**Answer:**

1. India continues to value traditional practices such as **Ayurveda, yoga and meditation**.
2. At the same time, scientists are launching rockets and farmers are using technology to grow better crops.
3. Children learn science and technology along with dance and music.
4. Faster trains and digital payments show changes taking place in modern life.
5. Thus, modern developments can add **new colours to old norms** while India continues to value its cultural heritage.

10. How would organising a cultural fair help students understand “unity in diversity”?**Answer:**

1. Different groups can explore the dress, food, festivals, languages, dance and music of different Indian states.
2. Each group can prepare posters, displays and a booth representing its assigned state.
3. Students can visit other booths and learn about the unique features of different regions.
4. They can then identify the similarities and common values shared among the states.
5. Therefore, the cultural fair can help students understand how diverse cultures together form one vibrant country.

5.13 Five-mark questions with Answers of Applied Type: (10 Questions)**Five-Mark Descriptive Questions with Answers – Applied Type:****1. Your school is celebrating Republic Day. As a student, how would you participate meaningfully in the celebration?****Answer:**

1. I would participate respectfully in the **National Flag unfurling ceremony**.
2. I would sing the **National Anthem** with pride and unity along with my classmates.
3. I would explain that saffron represents strength and courage, white represents peace and truth, and green represents growth and prosperity.
4. I would help prepare a tableau or poster showing the culture and special features of my state.
5. I would encourage my classmates to respect the National Flag and understand the importance of Republic Day.

2. Your teacher gives you an Indian currency note and asks you to study it carefully. What five features would you investigate?**Answer:**

1. I would identify the **denomination and colour** of the currency note.
2. I would count and identify the **languages** printed on it.
3. I would identify the **monument and symbols** shown on the note.
4. I would look for pictures of animals and any important **messages** printed on it.

5. I would also observe special features such as raised prints and symbols that help people with visual impairment.

3. Your school wants to design a new emblem. How would you apply what you learned about India's National Emblem to create it?

Answer:

1. I would first decide the **values and message** that our school emblem should communicate.
2. I would select symbols representing qualities such as **knowledge, courage, unity and confidence**.
3. I would choose suitable shapes and colours to make the emblem meaningful.
4. I would include a short motto that represents the ideals of our school.
5. I would ensure that every symbol, word, shape and colour has a clear purpose and meaning.

4. Your class has students who speak different languages. How would you use this diversity to create an interesting classroom activity?

Answer:

1. I would prepare a list of all the **languages spoken by students** in the class.
2. I would choose a common word, such as “mango,” and ask students to say it in their languages.
3. We would display these different words on a colourful classroom chart.
4. Students could share a simple song, story or expression from their language.
5. This activity would help everyone appreciate India's rich **linguistic diversity**.

5. Suppose you are asked to explain India's diversity using a nearby forest as an example. How would you explain it?

Answer:

1. I would point out that a forest contains many different **plants, trees, animals, birds and insects**.
2. All these different living things contribute to making the forest stronger and more beautiful.
3. Similarly, India has people with different languages, foods, clothing and traditions.
4. These differences enrich the country rather than making it weak.
5. Therefore, just as diversity strengthens a forest, **diversity makes India stronger and more self-sufficient**.

6. Your class is organising an “Indian Headgear Day.” How would you use the event to teach cultural diversity?

Answer:

1. I would ask students to learn about traditional headgear from different regions of India.
2. We could demonstrate a **saafa or pagri from Rajasthan** and a **topi from Himachal Pradesh**.
3. Students could also make headgear or caps using waste materials.
4. We would discuss how headgear may indicate a person's region, beliefs, occupation or traditions.
5. The activity would help students understand that headgear is an important part of India's **tradition, honour and cultural heritage**.

7. You have been asked to organise a classroom activity on Indian music. How would you conduct it?

Answer:

1. I would collect pictures or recordings of different Indian musical instruments and drums.
2. I would introduce instruments such as **tabla, dhol, mridangam, sitar and shehnai**.

3. Students would listen to different sounds and try to identify the instruments.
4. I would encourage them to make a simple musical instrument using **locally available materials**.
5. We would discuss how music and musical instruments reflect the culture and traditions of different parts of India.

8. Your class has been assigned a state for a cultural fair. How would you prepare your group's presentation?

Answer:

1. We would collect information about the state's **traditional dress and popular food**.
2. We would identify its important **festivals and languages**.
3. We would learn about the state's traditional **dance or music**.
4. We would prepare posters, cut-outs and other displays and arrange them in our state booth.
5. During the fair, we would explain our state's unique features and also learn about other states by visiting their booths.

9. Your friend thinks that people speaking different languages cannot remain united. How would you use the chapter to explain otherwise?

Answer:

1. I would explain that India has a rich variety of **languages, religions, clothing and traditions**.
2. These differences do not prevent people from living together.
3. People can respect one another while helping and supporting each other.
4. Different regions are like different threads woven together into one strong and colourful fabric.
5. Therefore, India's diversity can exist successfully alongside a strong **spirit of togetherness**.

10. You are asked to prepare a presentation titled "India: Tradition and Progress." What five points would you include?

Answer:

1. I would explain that India preserves traditional practices such as **Ayurveda, yoga and meditation**.
2. I would highlight that Indian scientists are **launching rockets**.
3. I would show how farmers are using **technology to grow better crops**.
4. I would explain that children learn science and technology along with dance and music.
5. I would conclude that modern developments are adding **new colours to India's old norms**, showing that tradition and progress can grow together.

5.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. Which combination correctly represents the meanings of the colours of the Indian National Flag?

- A. Saffron–Peace, White–Courage, Green–Duty
- B. Saffron–Strength and courage, White–Peace and truth, Green–Growth and prosperity
- C. Saffron–Growth, White–Prosperity, Green–Courage
- D. Saffron–Truth, White–Growth, Green–Peace

Answer: B. Saffron–Strength and courage, White–Peace and truth, Green–Growth and prosperity

2. A student wants to use a symbol from the National Flag to represent *dharma* or duty. Which should be selected?

- A. Green band
- B. White band
- C. Ashoka Chakra
- D. Saffron band

Answer: C. Ashoka Chakra

3. Which sequence is chronologically correct?

- A. Constitution came into effect → Independence → Republic Day
- B. Independence → Constitution came into effect → annual Republic Day celebrations
- C. Republic Day → Independence → Constitution
- D. Constitution → Independence Day → Freedom struggle

Answer: B. Independence → Constitution came into effect → annual Republic Day celebrations

4. Why is 26 January celebrated as Republic Day?

- A. India became independent on this date.
- B. The National Flag was designed on this date.
- C. India began following its Constitution on this date in 1950.
- D. The first currency note was issued on this date.

Answer: C. India began following its Constitution on this date in 1950.

5. Which of the following is NOT mentioned as part of the Republic Day parade described in the chapter?

- A. Fighter jets
- B. State tableaux
- C. Cultural programmes
- D. Cricket matches

Answer: D. Cricket matches

6. Which pair is correctly matched?

- A. Independence Day — 26 January 1950
- B. Republic Day — 15 August 1947
- C. Independence — 15 August 1947
- D. Constitution — 15 August 1950

Answer: C. Independence — 15 August 1947

7. Riya observes a tiny pair of spectacles on an Indian currency note. Which national mission does it represent?

- A. Digital India
- B. Swachh Bharat Abhiyan
- C. Fit India
- D. Skill India

Answer: B. Swachh Bharat Abhiyan

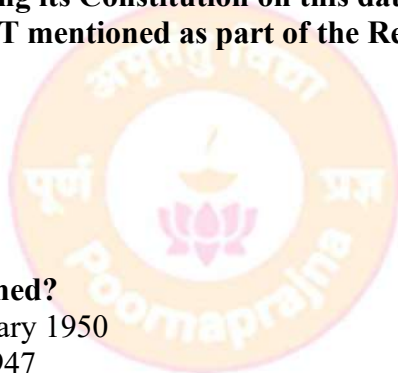
8. Why are Gandhi ji's spectacles used as the symbol discussed in Question 7?

- A. He manufactured spectacles.
- B. He designed Indian currency.
- C. He emphasised keeping one's surroundings clean.
- D. He introduced the MANI app.

Answer: C. He emphasised keeping one's surroundings clean.

9. Which feature is particularly useful for a person with visual impairment while identifying currency?

- A. State tableau
- B. Raised prints and symbols
- C. Cultural dances
- D. National Anthem



Answer: B. Raised prints and symbols

10. The MANI app mentioned in the chapter is associated with:

- A. translating Indian languages.
- B. identifying dance forms.
- C. identifying different currency notes.
- D. locating national monuments.

Answer: C. Identifying different currency notes

11. Which set of qualities is associated with India's National Emblem in the chapter?

- A. Peace, truth and prosperity
- B. Strength, courage and confidence
- C. Growth, duty and cleanliness
- D. Unity, equality and prosperity

Answer: B. Strength, courage and confidence

12. The chapter's account of lions in India best illustrates:

- A. the disappearance of all wildlife.
- B. the success of conservation efforts.
- C. the importance of domestic animals.
- D. the growth of forests in every state.

Answer: B. The success of conservation efforts

13. According to the chapter, more than _____ languages are spoken across India.

- A. 100
- B. 500
- C. 1,000
- D. 10,000

Answer: C. 1,000

14. A class learns the word “mango” in Tamil, Telugu, Marathi and Bengali. Which idea is the activity mainly intended to develop?

- A. Mathematical ability
- B. Linguistic diversity
- C. Road safety
- D. Wildlife conservation

Answer: B. Linguistic diversity

15. Why does the chapter compare a forest with India?

- A. Both contain only one type of living thing.
- B. Both require people to water them continuously.
- C. Diversity can make both stronger and more self-sufficient.
- D. Every Indian lives near a forest.

Answer: C. Diversity can make both stronger and more self-sufficient.

16. Which analogy best expresses the chapter's message?

- A. Diverse forest : stronger forest :: Diverse India : stronger India
- B. Diverse forest : weaker forest :: Diverse India : stronger India
- C. Garden : diversity :: India : uniformity
- D. Forest : one species :: India : one tradition

Answer: A. Diverse forest : stronger forest :: Diverse India : stronger India

17. A man wearing a colourful *saafa* or *pagri*, as described in the chapter, is most likely associated with:

- A. Rajasthan
- B. Himachal Pradesh
- C. Gujarat
- D. Odisha

Answer: A. Rajasthan

18. Which traditional headgear is associated with Himachal Pradesh in the chapter?

- A. Saafa
- B. Pagri
- C. Topi
- D. Turban only

Answer: C. Topi

19. Which statement about traditional headgear is most accurate according to the chapter?

- A. It is used only to protect people from rain.
- B. It can reflect region, belief, occupation and cultural heritage.
- C. It is identical throughout India.
- D. It is worn only by children.

Answer: B. It can reflect region, belief, occupation and cultural heritage.

20. Why can the same type of instrument, such as a drum, look and sound different in different regions?

- A. All drums are imported.
- B. Local culture, traditions and materials influence them.
- C. Every state follows identical musical traditions.
- D. Drums are used only for prayer.

Answer: B. Local culture, traditions and materials influence them.

21. Which musical pairing is correct according to the chapter?

- A. Mridangam–Carnatic; Sitar–Hindustani
- B. Sitar–Carnatic; Mridangam–Hindustani
- C. Shehnai–Carnatic; Mridangam–Western
- D. Mridangam–Western; Sitar–Carnatic

Answer: A. Mridangam–Carnatic; Sitar–Hindustani

22. Which of the following is NOT given as a purpose of music and dance in the chapter?

- A. Celebrating
- B. Praying
- C. Sharing stories
- D. Issuing currency

Answer: D. Issuing currency

23. “Different threads woven together into one strong, vibrant fabric” is used as an analogy for:

- A. India's road network.
- B. India's currency system.
- C. India's diverse regions united by togetherness.
- D. India's forests alone.

Answer: C. India's diverse regions united by togetherness.

24. Which combination best represents both India's traditions and its modern progress?

- A. Yoga and meditation + rockets and agricultural technology
- B. Only ancient practices
- C. Only rockets and computers
- D. Traditional headgear + no technological development

Answer: A. Yoga and meditation + rockets and agricultural technology

25. Scientists launching rockets and farmers using technology to grow better crops mainly demonstrate:

- A. disappearance of traditions.
- B. India's progress in science and technology.
- C. decline in cultural diversity.
- D. replacement of agriculture by industries.

Answer: B. India's progress in science and technology.

26. Which activity would BEST help students experience the chapter's idea of “unity in diversity”?

- A. Memorising only dates
- B. Studying only one state's culture
- C. Organising a cultural fair featuring different Indian states
- D. Avoiding discussions about different languages

Answer: C. Organising a cultural fair featuring different Indian states

27. During a cultural fair, which set of features should students investigate about their assigned state?

- A. Only population and area
- B. Dress, food, festivals, languages, dance or music
- C. Only currency
- D. Only wildlife

Answer: B. Dress, food, festivals, languages, dance or music

28. After visiting different state booths, students find that the states have unique traditions but also share common values. What conclusion is most appropriate?

- A. Differences prevent national unity.
- B. All states should follow identical traditions.
- C. Diversity and togetherness can coexist.
- D. Regional cultures should be replaced by one culture.

Answer: C. Diversity and togetherness can coexist.

29. Which statement BEST captures the central idea of the chapter?

- A. India should remove regional differences.
- B. India's cultural diversity, shared values and progress together make it vibrant.
- C. Only national symbols make India unique.
- D. Modern technology should replace traditional practices.

Answer: B. India's cultural diversity, shared values and progress together make it vibrant.

30. Which action BEST reflects the responsibility encouraged at the end of the chapter?

- A. Ignoring traditions different from one's own
- B. Valuing only technological progress
- C. Caring for India's rich and wonderful country while appreciating its diversity
- D. Following only one's regional culture

Answer: C. Caring for India's rich and wonderful country while appreciating its diversity

5.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities While Teaching the Chapter:

(1) Experiential Learning through National Symbols:

Display or ask students to observe the National Flag, National Emblem and Indian currency notes. Encourage them to identify symbols and explain their meanings in their own words. This makes concepts such as courage, peace, truth, duty and prosperity concrete and memorable.

(2) Celebrate Linguistic Diversity in the Classroom:

Prepare a “Languages of Our Class” chart showing the languages spoken by students and their families. Select simple words such as *mango*, *water* or *friend* and find their equivalents in different languages. This promotes curiosity and appreciation for India's rich linguistic diversity.

(3) Use the Forest Analogy for Conceptual Learning:

Compare a garden containing fewer varieties with a forest containing many kinds of plants and animals. Ask students to connect the strength of a diverse forest with the diversity of Indian society. This helps them understand the chapter's idea that diversity makes India stronger and more self-sufficient.

(4) Integrate Art, Music and Culture:

Use pictures, short demonstrations or classroom displays of regional headgear, musical instruments and dance forms. Students can identify examples such as the *saafa/pagri*, *topi*, tabla, dhol and mridangam and connect them with cultural traditions. This provides an enjoyable arts-integrated approach to learning.

(5) Organise a Mini Cultural Fair:

Divide students into groups and assign each group a different Indian state. Let them explore its traditional dress, food, festivals, languages, dance and music and prepare a simple classroom booth. Conclude with a discussion on the unique features, similarities and common values found across states.

(6) Promote Inclusive Education through Currency Exploration:

While examining currency notes, discuss raised prints and symbols designed for people with visual impairment and the MANI app mentioned in the chapter. Ask students why everyday objects should be usable by people with different needs. This naturally introduces empathy and inclusive design.

(7) Connect the Chapter with Environmental Responsibility:

Use the example of lions and their conservation to discuss the importance of protecting wildlife. Students can prepare a simple “Save Our Wildlife” poster based on the chapter. This connects cultural learning with environmental responsibility.

(8) Use Collaborative Learning to Teach Togetherness:

Form mixed groups for activities so that students listen to different ideas, share responsibilities and help one another. At the end, relate their teamwork to the chapter's comparison of India's regions to colourful threads woven into a strong fabric.

(9) Connect Tradition with Modern India:

Create a two-column classroom display titled “Our Traditions” and “India Today.” Students can place Ayurveda, yoga and meditation on one side and rockets, agricultural technology, faster trains and digital payments on the other. Discuss how modern developments can add to rather than simply replace older traditions.

(10) Use Reflection and Exit Questions:

End the lesson with questions such as, “What makes India vibrant?”, “How does diversity make us stronger?” and “What can you do to care for your country?” Encourage every student to give one example from the chapter. This provides quick formative assessment while reinforcing the chapter's central message of **diversity, togetherness and responsible citizenship**.

5.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

(1) Interactive “Vibrant India” Digital Map:

Create an interactive map activity in which students select different states and attach pictures or information about their languages, dress, food, dance, music and festivals.

Students can present one state to the class and compare it with another. This converts geographical and cultural diversity into an exploratory learning experience.

(2) Currency Note Detective Challenge:

Form student teams and give them enlarged pictures of Indian currency notes for a “detective investigation.” Ask them to locate the denomination, languages, monument, symbols, cleanliness message and accessibility features. Teams can record their findings on a Currency Investigation Card and earn points for accurate observations.

(3) “One Word—Many Languages” Audio Wall:

Let students record themselves saying a simple word such as “mango,” “water” or “welcome” in different Indian languages represented in the class. Combine the recordings into a QR-code/audio-based classroom language wall. This makes the chapter's discussion of India's more than one thousand spoken languages interactive and student-driven.

(4) Virtual Republic Day Parade:

Divide the class into groups representing different components of a Republic Day parade, such as state tableaux, cultural programmes and defence services. Students can create miniature tableaux using cardboard, clay, recycled materials or digital slides and conduct a classroom parade. This helps them experience the chapter's Republic Day content rather than merely memorising it.

(5) “Forest of Diversity” Simulation:

Give each student a card representing a different plant, tree, animal, bird or insect and construct a classroom “forest.” Then relate the variety within the forest to India's different languages, foods, clothes, songs and dances. The simulation makes the abstract idea that **diversity creates strength** easier for Grade 5 students to understand.

(6) Indian Music Sound-Lab:

Use short audio samples or teacher/student demonstrations of instruments such as tabla, dhol, mridangam, thavil and idakka. Students can listen, identify differences in sounds and match instruments with pictures or musical traditions. They can then experiment with safe classroom objects to investigate how different materials can produce different rhythms and sounds.

(7) Headgear Design Studio:

Students can create models inspired by regional headgear such as Rajasthan's *saafa/pagri* and Himachal Pradesh's *topi* using paper or reusable craft materials. Each student gives a one-minute “designer explanation” about the region and cultural meaning represented. The activity integrates art, communication and cultural learning.

(8) Wildlife Conservation Problem-Solving Lab:

Present the chapter's story of India's lions as a simple problem: “Lion numbers have fallen greatly—what should we do?” Groups brainstorm conservation ideas before learning that sustained efforts helped lion numbers recover to several hundred in the wild. This turns factual content into age-appropriate problem-solving and environmental thinking.

(9) Tradition + Technology Innovation Board:

Create two sets of cards containing examples such as Ayurveda, yoga and meditation, alongside rockets, agricultural technology, faster trains and digital payments. Students arrange and connect the cards on an “India: Then, Now and Tomorrow” board. They can then propose one idea showing how technology and tradition could coexist in the future.

(10) Gamified “Unity in Diversity” Escape Challenge:

Set up simple clue stations based on the National Flag, currency, languages, headgear, musical instruments, wildlife and state cultures. Each correctly solved clue gives

students a word or puzzle piece, ultimately forming a message such as **“Together We Make India Vibrant.”** The game provides collaborative revision while reinforcing the chapter's central idea that India's diverse regions are like colourful threads woven into one strong fabric.

5.17: Practicing Questions/Question Bank:

A. Fill in the Blanks:

1. India celebrates Republic Day on _____.
Answer: 26 January
2. India became independent on _____.
Answer: 15 August 1947
3. India began following its Constitution on _____.
Answer: 26 January 1950
4. The saffron colour of the National Flag represents _____ and _____.
Answer: strength; courage
5. The white colour represents _____ and _____.
Answer: peace; truth
6. The green colour represents _____ and _____.
Answer: growth; prosperity
7. The Ashoka Chakra represents _____ or dharma.
Answer: duty
8. The spectacles seen on Indian currency notes represent the _____ Abhiyan.
Answer: Swachh Bharat
9. The _____ app helps people with visual impairment identify currency notes.
Answer: MANI
10. The National Emblem represents strength, courage and _____.
Answer: confidence
11. Lions in India are now found in the _____ forests of Gujarat.
Answer: Gir
12. More than _____ languages are spoken across India.
Answer: 1,000
13. The colourful headgear worn by men in Rajasthan is called a _____ or pagri.
Answer: saafa
14. The traditional headgear mentioned for Himachal Pradesh is called a _____.
Answer: topi
15. The _____ is an instrument used in Carnatic music.
Answer: mridangam
16. The sitar and shehnai are associated with _____ music.
Answer: Hindustani

17. Ayurveda, yoga and _____ are examples of India's traditional practices.

Answer: meditation

18. Different regions of India are compared to colourful _____ woven into a strong fabric.

Answer: threads

B. One-Mark Descriptive Questions:

1. **When is Republic Day celebrated in India?**

Answer: Republic Day is celebrated on 26 January.

2. **When did India become independent?**

Answer: India became independent on 15 August 1947.

3. **When did India begin following its Constitution?**

Answer: India began following its Constitution on 26 January 1950.

4. **What does the saffron colour of the National Flag represent?**

Answer: It represents strength and courage.

5. **What does the white colour represent?**

Answer: It represents peace and truth.

6. **What does the Ashoka Chakra represent?**

Answer: It represents duty or dharma.

7. **What does the green colour represent?**

Answer: It represents growth and prosperity.

8. **What does the spectacles symbol on currency notes represent?**

Answer: It represents the Swachh Bharat Abhiyan.

9. **What is the purpose of the MANI app?**

Answer: It helps people with visual impairment identify currency notes.

10. **Where are lions found in India today according to the chapter?**

Answer: They are found in the Gir forests of Gujarat.

11. **Name one traditional headgear of Rajasthan.**

Answer: Saafa or pagri.

12. **Name one instrument used in Carnatic music.**

Answer: Mridangam.

13. **Name two instruments associated with Hindustani music.**

Answer: Sitar and shehnai.

14. **Mention one way in which music and dance bring people together.**

Answer: They help people celebrate, pray or share stories together.

15. **Why is India called diverse?**

Answer: India has a rich variety of languages, religions, clothing and traditions.

C. Two-Mark Descriptive Questions:

1. Why is 26 January important to India?**Answer:**

- India began following its Constitution on 26 January 1950.
- Therefore, 26 January is celebrated as Republic Day.

2. What do the saffron and white colours of the National Flag represent?**Answer:**

- Saffron represents strength and courage.
- White represents peace and truth.

3. Mention two features that help people with visual impairment identify currency notes.**Answer:**

- Currency notes have raised prints and symbols.
- The MANI app helps identify different notes.

4. What can we learn by observing an Indian currency note?**Answer:**

- We can observe its languages, monuments and symbols.
- We can also identify its value, colour and important messages.

5. What information can traditional headgear provide about a person?**Answer:**

- It may indicate where a person comes from.
- It may also reflect beliefs, occupation or cultural heritage.

6. Why are helmets important?**Answer:**

- Helmets protect the head from injury.
- They can prevent serious head injuries while riding two-wheelers or bicycles.

7. How are different Indian languages culturally important?**Answer:**

- Each language has its own history.
- Languages also contain rich songs and stories.

8. How do music and dance contribute to people's lives?**Answer:**

- They are used for celebrating, praying and sharing stories.
- They also bring people together.

9. Give two examples showing modern progress in India.**Answer:**

- Scientists launch rockets.

- Farmers use technology to grow better crops.

10. How do people maintain togetherness despite India's diversity?

Answer:

- People live together despite differences in languages, religions, clothing and traditions.
- They help and support one another.

D. Three-Mark Descriptive Questions:

1. Explain the meanings represented by the National Flag.

Answer:

- Saffron represents strength and courage.
- White represents peace and truth, while green represents growth and prosperity.
- The Ashoka Chakra represents duty or dharma.

2. Describe three important features of the Republic Day parade.

Answer:

- Fighter jets participate in the celebration.
- Different states present tableaux.
- Cultural programmes and different defence and security forces are also part of the parade.

3. Explain how Indian currency notes reflect the country.

Answer:

- They contain several Indian languages.
- They show monuments, symbols and important messages.
- They also contain features connected with Gandhi ji, cleanliness and accessibility.

4. How does the chapter explain the importance of diversity through a forest?

Answer:

- A forest contains many different plants, animals, birds and insects.
- This variety helps the forest look after itself and makes it stronger.
- Similarly, diversity makes India stronger and more self-sufficient.

5. Explain the cultural importance of traditional headgear.

Answer:

- Different regions have distinctive forms of headgear.
- Headgear can indicate region, beliefs or occupation.
- It represents tradition, honour and cultural heritage.

6. How does music reflect India's diversity?**Answer:**

- Different regions have different musical instruments and traditions.
- Their rhythms and sounds are shaped by local culture and materials.
- Yet music brings people together through celebration, prayer and storytelling.

7. How does India maintain unity despite cultural differences?**Answer:**

- Indians follow different languages, religions, clothing and traditions.
- People still live together and help and support one another.
- Different regions together form one strong and vibrant country.

8. How does India combine tradition with modern development?**Answer:**

- India continues practices such as Ayurveda, yoga and meditation.
- Scientists launch rockets and farmers use modern technology.
- Children learn science and technology along with dance and music.

E. Five-Mark Descriptive Questions:**1. Explain how India's diversity makes the country vibrant and strong.****Answer:**

- India has many languages, religions, clothes and traditions.
- Different regions have their own foods, songs, dances and cultural practices.
- People continue to live together despite these differences.
- They help and support one another.
- Thus, India's diverse regions are like colourful threads woven into one strong and vibrant fabric.

2. Describe what students can learn about India by studying its currency notes.**Answer:**

- Students can observe the denomination and colour of a note.
- They can identify the different languages printed on it.
- They can study monuments, symbols, animals and messages shown on it.
- The spectacles symbol introduces them to the Swachh Bharat Abhiyan and Gandhi ji's emphasis on cleanliness.
- Raised prints, symbols and the MANI app also teach students about accessibility.

3. Explain the importance of the National Flag and its different parts.**Answer:**

- The National Flag brings citizens together with a feeling of pride and unity.
- Saffron represents strength and courage.
- White represents peace and truth.
- Green represents growth and prosperity.
- The Ashoka Chakra represents duty or dharma.

4. **Explain how the chapter shows both India's traditions and its modern progress.**

Answer:

- India values traditional practices such as Ayurveda, yoga and meditation.
- Indian scientists launch rockets.
- Farmers use technology to grow better crops.
- Children learn science and technology along with dance and music.
- Faster trains and digital payments show how new developments are adding new colours to India's older traditions.

5. **Describe how a cultural fair can help students understand India better.**

Answer:

- Students can work in groups representing different Indian states.
- They can research traditional dress, food, festivals and languages.
- They can also explore regional dance and music.
- Each group can prepare displays and present its state through a classroom booth.
- By visiting all the booths, students can identify both unique features and common values among different states.

6. **“A diverse forest and a diverse India are similar.” Explain this statement.**

Answer:

- A forest contains many types of plants, trees, animals, birds and insects.
- Such variety helps the forest maintain itself.
- Diversity makes the forest stronger and more beautiful.
- India similarly has diverse languages, foods, clothes, songs and traditions.
- Therefore, diversity contributes to making India stronger and self-sufficient.

5th Standard World Around Us Book Chapter 6

Chapter 6: Some Unique Places

6.1 Summary of the Chapter:

Chapter 6: Some Unique Places — Summary:

- (1) **India has many unique natural regions:** The chapter follows Shanti and her family as they travel through the **Andaman and Nicobar Islands, Sundarbans, Northeast India, and the Western Ghats**, discovering the diversity of India's landscapes, plants, animals, and people.
- (2) **Andaman and Nicobar Islands:** The southernmost point of India is **Indira Point**, located in the Andaman and Nicobar Islands. These islands contain rich forests with many plants and animals found only in this region.
- (3) **Unique wildlife and marine life:** Animals such as the **Andaman wood pigeon and Andaman hornbill** are found only on these islands. Coral reefs provide shelter to numerous sea creatures and show how marine life is important to the Earth.
- (4) **People living close to nature:** The people of **North Sentinel Island** maintain a deep connection with nature. Their knowledge of natural signs may have helped them survive the 2004 tsunami.
- (5) **Sundarbans and mangroves:** The **Sundarbans**, described as the largest mangrove forest in the world, lies where the River Ganga meets the sea. Mangroves can grow in muddy, salty conditions and have special roots adapted to their environment.
- (6) **Importance of mangrove forests:** Mangrove roots hold the soil together and help prevent waves from washing away the land. Local people depend on these forests for their daily needs and have lived in harmony with nature for generations.
- (7) **Northeast India – nature and traditions:** Northeast India is rich in forests, rivers, hills, wildlife, farming, handicrafts, music, dance, and festivals. The chapter also highlights community efforts to protect the **Hargila (Greater Adjutant Stork)** and its nests.
- (8) **Living root bridges:** In the Northeast, people have developed **living root bridges** by guiding tree roots across streams. Over time, the roots become strong enough for people to walk on, showing how humans can work creatively with nature.
- (9) **Western Ghats – a biodiversity-rich region:** The Western Ghats are a long chain of forested hills with rich plant and animal life. Some species, such as the **lion-tailed macaque**, are found only in this region, and several important rivers begin in these hills.
- (10) **Conservation is everyone's responsibility:** The chapter highlights protected areas and the **Save Silent Valley Movement** to show how people can work together to conserve forests and wildlife. Its central message is that India's natural regions are interconnected and must be **understood, respected, and protected for future generations**.

6.2 Important Formulas:

Important Formulas – Chapter 6: *Some Unique Places*

The chapter is mainly **descriptive and environmental** and does **not introduce any specific mathematical or scientific formulas**. It focuses on islands, coral reefs, mangroves, biodiversity, the Northeast, living root bridges, the Western Ghats, and conservation.

However, the following **basic mathematical formulas can be used to create or solve quantitative/application-based problems related to the chapter**:

No.	Formula	Possible Chapter Application
1	Percentage = (Part ÷ Total) × 100	Calculating percentage of animals, plants, forests, or protected areas
2	Part = (Percentage × Total) ÷ 100	Problems based on percentages, such as the chapter's reference to India having around 75% of the world's wild tigers
3	Total = (Part × 100) ÷ Percentage	Finding a total population when a percentage is given
4	Distance = Speed × Time	Journey by ship, ferry, or other transport
5	Speed = Distance ÷ Time	Finding the speed during a journey
6	Time = Distance ÷ Speed	Finding travel time between places
7	Average = Sum of observations ÷ Number of observations	Finding average numbers of plants, animals, rainfall observations, etc.
8	Difference = Larger quantity – Smaller quantity	Comparing numbers of species, trees, protected areas, etc.
9	Increase = New value – Original value	Studying an increase in the population of a protected species
10	Percentage Increase = (Increase ÷ Original value) × 100	Calculating growth in wildlife populations following conservation efforts

Important numerical facts from the chapter:

The chapter mentions several quantities that can be converted into quantitative questions: **around 75% of the world's wild tigers are in India, over 200 types of mangoes** were recorded in the Western Ghats, and the Western Ghats contain **over 50 protected areas**.

6.3 Fill-Up the Blank LOTS type questions with Answers: (30 Questions)

Fill-in-the-Blank Questions with Answers – LOTS Type:

- _____ is the southernmost tip of India.
Answer: Indira Point
- The Andaman and Nicobar Islands are a long chain of _____.
Answer: islands
- Shanti's family started their island journey from _____.
Answer: Sri Vijaya Puram
- The _____ wood pigeon is found only in the Andaman Islands.
Answer: Andaman
- The Andaman _____ is another bird found only in these islands.
Answer: hornbill
- The base of a tree supports it just like its _____.
Answer: roots
- Everyone travelling on a ferry must wear a _____ jacket.
Answer: life
- Life jackets help people stay _____ if they fall into water.
Answer: afloat
- Tiny _____ provide shelter to many creatures in the sea.
Answer: corals

10. The people of _____ Sentinel Island do not want visitors.
Answer: North
11. A _____ hit the Andaman and Nicobar region in 2004.
Answer: tsunami
12. Shanti's family travelled from Sri Vijaya Puram to _____ by ship.
Answer: Kolkata
13. The _____ is described in the chapter as the largest mangrove forest in the world.
Answer: Sundarbans
14. The Sundarbans is found where the River _____ meets the sea.
Answer: Ganga
15. Special trees called _____ grow in the wet and salty land of the Sundarbans.
Answer: mangroves
16. Mangrove roots help hold the _____ together.
Answer: soil
17. The seven Northeastern states are popularly called the "Seven _____."
Answer: Sisters
18. The state of _____, along with the Seven Sisters, forms Northeast India.
Answer: Sikkim
19. Bhut Jolokia is also known as the _____ pepper.
Answer: ghost
20. The Hargila bird is also known as the Greater Adjutant _____.
Answer: Stork
21. Living root bridges are formed from the _____ of trees.
Answer: roots
22. The _____ Ghats are a long chain of forested hills rich in plant and animal life.
Answer: Western
23. The _____-tailed macaque is found in the Western Ghats.
Answer: lion
24. More than _____ types of mangoes were found and recorded in the Western Ghats.
Answer: 200
25. Silent Valley National Park is a rainforest located in _____.
Answer: Kerala
26. The movement to protect Silent Valley was called the "Save _____ Valley Movement."
Answer: Silent
27. Protected areas are kept safe by the _____ to protect plants, animals and nature.
Answer: government
28. The Western Ghats have over _____ protected areas.
Answer: 50
29. Kanyakumari is the southernmost point of the Indian _____.
Answer: mainland
30. We must learn, respect and _____ our natural wonders for the future.
Answer: protect

6.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)**Fill-in-the-Blank Questions with Answers – HOTS Type:**

1. If a tree grows in an area with loose soil and strong winds, wide-spreading _____ can provide better support to the tree.
Answer: roots
2. A person who knows how to swim should still wear a _____ while travelling by ferry because an accident can occur unexpectedly.
Answer: life jacket
3. If coral reefs are destroyed, many sea creatures may lose their _____.
Answer: shelter / habitat
4. The survival of the people of North Sentinel Island during the 2004 tsunami suggests that traditional knowledge of _____ can help people recognise possible dangers.
Answer: nature / natural signs
5. If mangrove forests disappeared from a coastal region, the land would become more vulnerable to being washed away by _____.
Answer: waves
6. Mangroves can survive in the Sundarbans because they are specially adapted to _____ and salty land.
Answer: muddy / wet
7. If the mangrove roots did not hold the soil together, coastal _____ would increase.
Answer: erosion
8. People living near the Sundarbans should protect mangrove forests because their daily lives and livelihoods _____ on them.
Answer: depend
9. If an animal is found naturally only in one particular geographical region, protecting its _____ becomes especially important for its survival.
Answer: habitat
10. The close relationship between culture and nature in Northeast India shows that local traditions are influenced by the surrounding _____.
Answer: environment / nature
11. Teaching children to protect Hargila nests can help increase the _____ of these birds in the future.
Answer: population / number
12. If people destroy the trees whose roots form living root bridges, the bridges may eventually become _____.
Answer: weak / damaged
13. Living root bridges demonstrate that people can solve practical problems by working _____ nature rather than destroying it.
Answer: with
14. The presence of plants and animals found nowhere else makes a region especially important for _____.
Answer: conservation / protection
15. Since several rivers begin in the Western Ghats, protecting these forests also helps protect important _____ resources.
Answer: water
16. If medicinal plants found only in the Western Ghats disappear, traditional communities may lose important sources of _____.
Answer: medicine
17. Recording more than 200 varieties of mangoes in the Western Ghats helps people understand and conserve their local _____.
Answer: biodiversity / plant diversity

18. If the proposed dam in Silent Valley had been constructed, a large part of the special rainforest would have been _____.
Answer: flooded
19. The success of the Save Silent Valley Movement demonstrates the importance of _____ action in protecting nature.
Answer: collective / community
20. National parks, wildlife sanctuaries and tiger reserves are examples of _____ areas established to conserve nature.
Answer: protected
21. If trees are cut and animals are harmed inside protected areas, the region's _____ will be threatened.
Answer: biodiversity / wildlife
22. Protecting the Western Ghats is important not only for wildlife but also for keeping its forests and _____ healthy.
Answer: rivers
23. The Andaman and Nicobar Islands, Northeast India and Western Ghats are special because they contain many plants and animals adapted to their particular _____.
Answer: habitats / environments
24. When people use natural resources without damaging the environment, they are living in _____ with nature.
Answer: harmony
25. The chapter teaches that protecting one part of nature can benefit many other living things because all parts of an ecosystem are _____.
Answer: interconnected / connected
26. If students create a protection plan for a threatened bird in their locality, they are practising wildlife _____.
Answer: conservation
27. A bird's nest made of suitable twigs, leaves and soft materials should provide _____ to its eggs.
Answer: protection / safety
28. Protecting coral reefs is important because damage to them can affect the entire _____ ecosystem.
Answer: marine
29. The Silent Valley example shows that development projects should consider their possible impact on the _____ before they are carried out.
Answer: environment
30. Shanti's journey teaches us that India's natural wonders can survive for future generations only when people learn about, respect and _____ them.
Answer: protect

6.5 One-mark questions with Answers of LOTS Type: (35 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

1. **What is the southernmost tip of India?**
Answer: Indira Point is the southernmost tip of India.
2. **What is an island?**
Answer: An island is a piece of land surrounded by water on all sides.
3. **What is the capital city of the Andaman and Nicobar Islands?**
Answer: Sri Vijaya Puram is the capital city of the Andaman and Nicobar Islands.
4. **Who was Shanti's local guide in the Andaman and Nicobar Islands?**
Answer: Rani was Shanti's local guide in the Andaman and Nicobar Islands.

5. **Name one bird found only in the Andaman Islands.**
Answer: The Andaman hornbill is one of the birds found only in the Andaman Islands.
6. **Why should a person wear a life jacket while travelling by ferry?**
Answer: A person should wear a life jacket because it helps them stay afloat if they fall into the water.
7. **What do corals provide to sea creatures?**
Answer: Corals provide shelter to many sea creatures.
8. **Which island mentioned in the chapter does not allow visitors?**
Answer: North Sentinel Island does not allow visitors.
9. **Which natural disaster struck the Andaman and Nicobar region in 2004?**
Answer: A tsunami struck the region in 2004.
10. **Which is described as the largest mangrove forest in the world?**
Answer: The Sundarbans is described as the largest mangrove forest in the world.
11. **Where is the Sundarbans located according to the chapter?**
Answer: The Sundarbans is located where the River Ganga meets the sea.
12. **What type of trees grow in the wet and salty land of the Sundarbans?**
Answer: Mangrove trees grow in the wet and salty land of the Sundarbans.
13. **How do mangrove roots help protect the land?**
Answer: Mangrove roots hold the soil together and help stop waves from washing the land away.
14. **How do the special roots of mangroves help the trees?**
Answer: The special roots help mangroves breathe in muddy salt water.
15. **How do people in the Sundarbans depend on the forest?**
Answer: People in the Sundarbans depend on the forest for their daily needs.
16. **What are the seven Northeastern states popularly called?**
Answer: The seven Northeastern states are popularly called the “Seven Sisters.”
17. **Which state, along with the Seven Sisters, makes up Northeast India?**
Answer: Sikkim, along with the Seven Sisters, makes up Northeast India.
18. **What is the Hargila bird also called?**
Answer: The Hargila bird is also called the Greater Adjutant Stork.
19. **How are women helping to protect Hargila birds?**
Answer: Women are teaching children to protect the nests of Hargila birds.
20. **What is Bhut Jolokia commonly known as?**
Answer: Bhut Jolokia is commonly known as the ghost pepper.
21. **Mention one use of Bhut Jolokia given in the chapter.**
Answer: Bhut Jolokia is used in making pickles and chutneys.
22. **What are living root bridges made from?**
Answer: Living root bridges are made from the roots of trees growing across streams.
23. **What are the Western Ghats?**
Answer: The Western Ghats are a long chain of forested hills known for their rich plant and animal life.
24. **How many states do the Western Ghats pass through according to the chapter activity?**
Answer: The Western Ghats pass through six states.
25. **Name an animal mentioned as being found only in the Western Ghats.**
Answer: The lion-tailed macaque is mentioned as an animal found only in the Western Ghats.
26. **For what purpose are many plants of the Western Ghats used?**
Answer: Many plants of the Western Ghats are used in traditional medicine.

27. **How do forest-dwelling communities depend on the Western Ghats?**
Answer: Forest-dwelling communities depend on the forests and plants for food, medicine and livelihood.
28. **How many types of mangoes were recorded in the Western Ghats in the survey mentioned in the chapter?**
Answer: More than 200 types of mangoes were recorded in the Western Ghats.
29. **Where is Silent Valley National Park located?**
Answer: Silent Valley National Park is located in Kerala.
30. **What was the movement to protect Silent Valley called?**
Answer: The movement to protect Silent Valley was called the “Save Silent Valley Movement.”
31. **Who joined together in the Save Silent Valley Movement?**
Answer: Villagers, students and scientists joined together in the Save Silent Valley Movement.
32. **What are protected areas?**
Answer: Protected areas are special forests, rivers or hills kept safe by the government to protect plants, animals and nature.
33. **How many protected areas are there in the Western Ghats according to the chapter?**
Answer: The Western Ghats have over 50 protected areas.
34. **Name two types of protected areas mentioned in the chapter.**
Answer: Wildlife sanctuaries and national parks are two types of protected areas mentioned in the chapter.
35. **What is special about Kanyakumari?**
Answer: Kanyakumari is the southernmost point of the Indian mainland where three seas meet.

6.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – HOTS Type:

1. **Why are the Andaman and Nicobar Islands considered special for biodiversity?**
Answer: They are special because many plants, birds, and animals found there are not found elsewhere.
2. **Why are wide roots useful to some trees in island forests?**
Answer: Wide roots help support the trees and keep them standing firmly.
3. **Why should even a good swimmer wear a life jacket on a ferry?**
Answer: A life jacket is necessary because it helps a person stay afloat during an unexpected accident.
4. **What may happen to sea creatures if coral reefs are damaged?**
Answer: Many sea creatures may lose the shelter and habitat provided by coral reefs.
5. **How might knowledge of nature help people during a natural disaster?**
Answer: Observing changes in wind, sea, and animal behaviour may warn people about approaching danger.
6. **Why are mangroves important in coastal areas?**
Answer: Mangroves protect coastal land by holding the soil together and reducing the effect of waves.
7. **What could happen if mangrove forests in the Sundarbans were destroyed?**
Answer: The land could be washed away more easily and local people could lose important resources.

8. Why do mangroves need special roots?

Answer: Their special roots help them breathe in muddy and salty conditions.

9. Why is it important for people in the Sundarbans to protect mangrove forests?

Answer: They should protect them because they depend on the forests for their daily needs and protection of the land.

10. How does Northeast India show a close relationship between people and nature?

Answer: Its crafts, music, dance, festivals, and daily life are closely connected with forests, hills, rivers, and wildlife.

11. Why is teaching children to protect Hargila nests useful?

Answer: It helps create awareness and supports the future survival of the Hargila bird.

12. What does the protection of the Hargila bird show about community action?

Answer: It shows that people working together can help protect endangered or vulnerable wildlife.

13. Why are living root bridges an example of working with nature?

Answer: They use growing tree roots to create useful bridges without replacing nature with artificial structures.

14. Why must living root bridges be cared for continuously?

Answer: They must be cared for because they are made from living roots that need to remain healthy and strong.

15. Why are regions with plants and animals found nowhere else especially important?

Answer: Such regions are important because losing their habitats could mean losing those unique species completely.

16. Why should the Western Ghats be protected carefully?

Answer: They should be protected because they support rich biodiversity, rare species, forests, and rivers.

17. How can protecting the Western Ghats also help people?

Answer: Protecting them helps preserve food, medicinal plants, livelihoods, and natural resources used by forest communities.

18. Why is recording different varieties of mangoes useful?

Answer: Recording them helps people understand and conserve local plant diversity.

19. What does the Save Silent Valley Movement teach us?

Answer: It teaches us that united public action can help protect valuable forests from harmful development.

20. Why are protected areas necessary?

Answer: Protected areas are necessary to keep plants, animals, forests, rivers, and other natural habitats safe.

21. How do protected areas help rare animals?

Answer: They provide safer habitats where rare animals can live without being harmed or losing their environment.

22. Why is it important to prevent cutting trees in protected areas?

Answer: Preventing tree cutting helps preserve habitats and keeps forests and rivers healthy.

23. What can students learn from Shanti's journey across India?

Answer: Students can learn that different regions have unique natural features and all of them deserve care and protection.

24. Why can people in different regions live differently but still depend on nature?

Answer: Their lifestyles differ according to local conditions, but nature provides resources needed for everyday life everywhere.

25. Why is conservation important for future generations?

Answer: Conservation ensures that natural wonders, wildlife, forests, and resources remain available for future generations.

26. What might happen if a species found only in one region loses its habitat?

Answer: The species may become very rare or disappear because it has no other natural habitat.

27. Why are forests important to rivers in the Western Ghats?

Answer: Forests help maintain the natural environment of the hills from which several rivers begin.

28. How does the chapter show that nature and culture are connected?

Answer: It shows that people's traditions, occupations, food, crafts, and daily practices often develop from their natural surroundings.

29. Why should local knowledge about plants and animals be preserved?

Answer: Local knowledge can help people use natural resources wisely and protect biodiversity.

30. What is the main lesson of the chapter about human responsibility?

Answer: The chapter teaches that people should learn about, respect, and protect nature so that its wonders survive.

6.7 Two-mark questions with Answers of LOTS Type: (25 Questions)**Two-Mark Descriptive Questions with Answers – LOTS Type:****1. What is an island? What does the chapter say about the islands around India?**

Answer:

1. An island is a land area surrounded by water on all sides.
2. There are over a thousand islands in the seas around India that are part of the country.

2. Write two facts about Indira Point and the Andaman and Nicobar Islands.

Answer:

1. Indira Point is the southernmost tip of India.
2. It is located in the long chain of islands known as the Andaman and Nicobar Islands.

3. Mention two special birds found in the Andaman Islands.

Answer:

1. The Andaman wood pigeon is found in these islands.
2. The Andaman hornbill is another bird unique to these islands.

4. Why are the forests of the Andaman Islands considered special?

Answer:

1. They are home to many unique animals, colourful birds, butterflies and insects.
2. Many of the trees found there are also unique to these islands.

5. State two points about the importance of wearing a life jacket.

Answer:

1. Everyone should wear a life jacket while travelling by ferry, even if they know how to swim.
2. A life jacket helps a person stay afloat if they fall into the water.

6. What did Shanti learn about corals at the Marine Interpretation Centre?

Answer:

1. Tiny corals provide shelter to many sea creatures.
2. Marine life is important not only for the sea but also for the whole Earth.

7. Write two facts about North Sentinel Island mentioned in the chapter.

Answer:

1. People there live like ancient hunter-gatherers and do not want visitors.
2. They survived the tsunami that struck the region in 2004.

8. What are two special features of the Sundarbans?

Answer:

1. The Sundarbans is described as the largest mangrove forest in the world.
2. It is found where the River Ganga meets the sea, where the land is muddy and salty.

9. How are mangrove roots useful?

Answer:

1. Mangrove roots hold the soil together and help stop waves from washing the land away.
2. Special roots also help mangroves breathe in muddy, salty water.

10. How do people of the Sundarbans depend on the mangrove forests?

Answer:

1. Many people live close to the forests and depend on them for their daily needs.
2. They have lived in harmony with nature for generations.

11. What are the “Seven Sisters”? What other state is included with them in Northeast India?

Answer:

1. The seven Northeastern states are collectively called the “Seven Sisters.”
2. Sikkim, along with these seven states, makes up Northeast India.

12. Mention two features of life in Northeast India.

Answer:

1. Northeast India has lush forests, flowing rivers and diverse animals and birds.
2. Weaving, crafts, music, dance and festivals are closely connected with its natural surroundings.

13. What is the Hargila bird? How are people helping to protect it?

Answer:

1. The Hargila bird is the Greater Adjutant Stork.
2. Women are teaching children to help protect the nests of these birds.

14. Write two facts about Bhut Jolokia.

Answer:

1. Bhut Jolokia, or ghost pepper, is one of the hottest chillies in the world and grows in Northeast India.
2. It is used in pickles and chutneys and even to keep elephants away from crops.

15. What are living root bridges?

Answer:

1. Living root bridges are formed from tree roots growing across streams.
2. The roots become strong enough over time for people to walk on them.

16. Mention two important features of the Western Ghats.

Answer:

1. The Western Ghats are a long chain of forested hills.
2. They are known for their rich plant and animal life.

17. Write two facts about wildlife and rivers in the Western Ghats.

Answer:

1. The lion-tailed macaque is mentioned as an animal found only in this region.
2. Several rivers of India begin in the hills of the Western Ghats.

18. How do forest-dwelling communities depend on the Western Ghats?**Answer:**

1. Many tribal and forest-dwelling communities have lived there for generations.
2. They depend on forest plants for food, medicine and their livelihood.

19. What did the survey mentioned in the chapter discover about mangoes?**Answer:**

1. Schools, farmers and experts helped conduct the survey in the Western Ghats.
2. The survey found and recorded more than 200 types of mangoes.

20. What was the Save Silent Valley Movement?**Answer:**

1. Villagers, students and scientists joined together to oppose a dam that would have flooded the special forest.
2. Their movement helped stop the dam, and Silent Valley remains a protected forest.

21. What are protected areas? Give two examples mentioned in the chapter.**Answer:**

1. Protected areas are special forests, rivers or hills kept safe by the government to protect plants, animals and nature.
2. Wildlife sanctuaries and national parks are examples of protected areas.

22. How do protected areas help the Western Ghats?**Answer:**

1. They help protect rare animals such as the lion-tailed macaque, tiger, elephant and hornbill.
2. They also help keep forests and rivers healthy.

23. Write two facts about Kanyakumari mentioned at the end of the journey.**Answer:**

1. Kanyakumari is the southernmost point of the Indian mainland.
2. It is a place where three seas meet.

24. What did Shanti's journey teach about different regions of India?**Answer:**

1. Every region has its own wildlife, trees, people and natural wonders.
2. People in different regions depend on nature and care for it in their own ways.

25. What is the main conservation message of the chapter?**Answer:**

1. India's natural regions are rich, beautiful and interconnected.
2. We must learn about, respect and protect these natural wonders for the future.

6.8. Two-mark questions with Answers of HOTS Type: (25 Questions)**Two-Mark Descriptive Questions with Answers – HOTS Type:****1. Why are the Andaman and Nicobar Islands important for protecting biodiversity?****Answer:**

1. The islands contain unique plants and animals, including species that are not found elsewhere.
2. Protecting their habitats helps ensure that these special species continue to survive.

2. What might happen if coral reefs around the islands are destroyed?**Answer:**

1. Many marine creatures could lose the shelter provided by corals.

2. This could disturb marine life, which the chapter says is important for the whole Earth.
3. **What does the survival of the North Sentinel Islanders during the 2004 tsunami suggest about traditional knowledge?**
Answer:
 1. Their survival suggests that close observation of natural signs may help people recognise approaching danger.
 2. It shows the value of a deep connection with and understanding of nature.
4. **What could happen to the Sundarbans if its mangrove roots were destroyed?**
Answer:
 1. The soil would not be held together as effectively.
 2. Waves could wash away more of the land, increasing coastal erosion.
5. **Why is protecting the Sundarbans important for both nature and people?**
Answer:
 1. Mangroves protect the land by holding the soil together and reducing damage caused by waves.
 2. Local people also depend on the forest for their daily needs.
6. **How do the special roots of mangroves show adaptation to their habitat?**
Answer:
 1. Mangroves grow in wet, muddy and salty land where ordinary conditions for roots are difficult.
 2. Their special roots help them breathe in the muddy salt water.
7. **How does the lifestyle of people in Northeast India show a close relationship with nature?**
Answer:
 1. Their weaving, crafts, music, dance and festivals are connected with the surrounding hills, forests and wildlife.
 2. This shows that culture and nature can develop together.
8. **Why is teaching children to protect Hargila nests a good conservation strategy?**
Answer:
 1. Protecting nests gives the birds safer places to reproduce and raise their young.
 2. Teaching children also encourages the next generation to participate in protecting wildlife.
9. **How do living root bridges demonstrate the intelligent use of natural resources?**
Answer:
 1. People guide living tree roots across streams instead of depending only on artificial materials.
 2. As the roots grow stronger, they form bridges that people can use for crossing.
10. **Why can the islands and Northeast India be considered nature's special places or hotspots?**
Answer:
 1. Many plants and animals found in these regions are not found anywhere else in the world.
 2. Their unique biodiversity makes these regions especially important for conservation.
11. **Why is protecting the Western Ghats important for local communities?**
Answer:
 1. Forest-dwelling communities depend on the forests and plants for food and medicine.
 2. They also depend on these natural resources for their livelihood.

12. Why is the survey of mango varieties in the Western Ghats valuable?**Answer:**

1. Recording more than 200 types of mangoes helps people recognise the rich variety of local plants.
2. Such documentation can create awareness about the importance of conserving local varieties.

13. What might be the effect if medicinal plants unique to the Western Ghats disappear?**Answer:**

1. Valuable plants used in traditional medicine could be lost.
2. Forest communities that depend on these plants for medicine and livelihood could also be affected.

14. Why should the forests of the Western Ghats be protected along with their rivers?**Answer:**

1. The Western Ghats contain rich plant and animal life, and several rivers begin in these hills.
2. Protecting the region therefore helps conserve both biodiversity and important water sources.

15. What does the Save Silent Valley Movement teach us about people's role in conservation?**Answer:**

1. Villagers, students and scientists joined together to oppose a dam that would have flooded the forest.
2. Their successful effort shows that collective action can help protect valuable natural areas.

16. Why are protected areas necessary even in naturally rich regions such as the Western Ghats?**Answer:**

1. Protected areas keep important forests, rivers, hills, plants and animals safe.
2. They help conserve wildlife such as the lion-tailed macaque, tiger, elephant and hornbill.

17. How can the loss of a unique species affect the natural richness of a region?**Answer:**

1. A region loses part of its special biodiversity when a unique species disappears.
2. This is especially serious when that species is not found anywhere else in the world.

18. How are the Sundarbans and living root bridges similar in showing the usefulness of roots?**Answer:**

1. Mangrove roots hold soil together and help protect the Sundarbans from waves.
2. In the Northeast, tree roots are guided across streams to form strong living bridges.

19. What common lesson can we learn from the Hargila conservation effort and the Save Silent Valley Movement?**Answer:**

1. Both examples show that people can take active steps to protect wildlife and natural habitats.

2. They demonstrate that community participation can make conservation efforts more effective.

20. Why does the chapter describe India as rich, beautiful and connected?

Answer:

1. Different regions have their own wildlife, trees, people and natural wonders.
2. Despite these differences, people everywhere depend on nature and care for it in different ways.

21. What could happen if people take resources from forests without caring for them?

Answer:

1. Forest plants, animals and other natural resources may gradually decline.
2. People who depend on those forests for food, medicine and livelihood may also suffer.

22. Why should students learn about local varieties of fruits and vegetables?

Answer:

1. Learning about local varieties helps students understand the biological diversity present in their own region.
2. It can also encourage them to value and conserve locally available varieties.

23. How does Shanti's journey show that conservation methods can differ from place to place?

Answer:

1. Different regions use different approaches, such as protecting mangroves, caring for bird nests and maintaining living root bridges.
2. These examples show that conservation can be adapted to local nature and people's ways of life.

24. Why should development projects be carefully examined before being built in ecologically sensitive areas?

Answer:

1. The proposed Silent Valley dam could have flooded a forest containing rare plants and animals.
2. Therefore, development should consider possible damage to valuable natural habitats.

25. What two responsibilities does the chapter suggest for protecting India's natural wonders for the future?

Answer:

1. People should learn about and respect the natural environment around them.
2. They should actively protect the land and its natural wonders for future generations.

6.9. Three-mark questions with Answers of LOTS Type: (18 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. Describe the Andaman and Nicobar Islands as presented in the chapter.

Answer:

1. The Andaman and Nicobar Islands are a long chain of islands, and Indira Point is the southernmost tip of India.
2. An island is a land area surrounded by water on all sides.
3. Sri Vijaya Puram is the capital city of the Andaman and Nicobar Islands.

2. Describe the special features of the forests of the Andaman Islands.

Answer:

1. The forests are home to unique animals, colourful birds, butterflies and insects.
2. Birds such as the Andaman wood pigeon and Andaman hornbill are found there.
3. The forests also have unique trees, including trees with large supporting roots.

3. What did Shanti learn about marine life during her visit?

Answer:

1. Shanti learned that tiny corals provide shelter to many sea creatures.
2. She understood that many different forms of life exist in the sea.
3. She also learned that marine life is important for the whole Earth.

4. Write three points about North Sentinel Island.

Answer:

1. The people of North Sentinel Island do not want visitors.
2. They survived the tsunami that struck the region in 2004.
3. The chapter suggests that their knowledge of natural signs may have helped them recognise the approaching danger.

5. Describe the Sundarbans.

Answer:

1. The Sundarbans is described as the largest mangrove forest in the world.
2. It is found where the River Ganga meets the sea.
3. Its land is muddy and salty, where special trees called mangroves grow.

6. Explain three important features of mangroves.

Answer:

1. Mangrove roots hold the soil together.
2. They help prevent waves from washing the land away.
3. Their special roots help the trees breathe in muddy salt water.

7. Describe the relationship between the people of the Sundarbans and the mangrove forest.

Answer:

1. Many people in the Sundarbans live close to the mangrove forest.
2. They depend on the forest for their daily needs.
3. They have lived in harmony with nature for generations.

8. Describe the natural and cultural richness of Northeast India.

Answer:

1. Northeast India has lush forests, flowing rivers and many animals and birds.
2. The people live closely with nature.
3. Their weaving, crafts, music, dance and festivals are connected with the hills, forests and wildlife.

9. Write three points about the Hargila bird and its protection.

Answer:

1. Hargila is another name for the Greater Adjutant Stork.
2. People in the Northeast are working to protect this bird.
3. Women teach children to help protect the nests of Hargila birds.

10. Write three facts about Bhut Jolokia.

Answer:

1. Bhut Jolokia is also called the ghost pepper.
2. It is one of the hottest chillies in the world and grows in Northeast India.
3. It is used in pickles and chutneys and even to keep elephants away from crops.

11. What are living root bridges? Explain in three points.

Answer:

1. Living root bridges are made by using the roots of living trees.
2. The roots are guided across streams and allowed to grow.

3. Over time, they become strong enough for people to walk across them.

12. Describe the biodiversity of the Western Ghats.

Answer:

1. The Western Ghats are a long chain of forested hills rich in plant and animal life.
2. Many special plants and animals are found in this region.
3. The lion-tailed macaque is one of the animals mentioned as being found only in the Western Ghats.

13. How do tribal and forest-dwelling communities depend on the Western Ghats?

Answer:

1. Many tribal and forest-dwelling communities have lived in the Western Ghats for generations.
2. They depend on forest plants for food and medicine.
3. They also depend on the forest for their livelihood.

14. Describe the survey of local fruit varieties mentioned in the chapter.

Answer:

1. Students participated in a survey with the help of schools, farmers and experts.
2. The survey found and recorded more than 200 types of mangoes in the Western Ghats.
3. The researchers were also studying varieties of jackfruit and jamun.

15. Explain the Save Silent Valley Movement.

Answer:

1. A dam was planned that would have flooded a part of the special forest of Silent Valley.
2. Villagers, students and scientists joined together to oppose the project.
3. The movement helped stop the dam, and Silent Valley remained a protected forest.

16. What are protected areas? Explain their importance.

Answer:

1. Protected areas are special forests, rivers or hills kept safe by the government.
2. They protect plants, animals and nature from harm.
3. The Western Ghats have over 50 protected areas, including sanctuaries, national parks and tiger reserves.

17. What did Shanti's journey teach her about India's natural diversity?

Answer:

1. Different regions of India have their own wildlife, trees, people and natural wonders.
2. People in different regions depend on nature and care for it in their own ways.
3. The journey showed how rich, beautiful and connected India is.

18. State three ways in which people can help preserve India's natural wonders.

Answer:

1. People should learn about the natural environment and its importance.
2. They should respect the land, forests, wildlife and other natural resources.
3. They should actively protect these natural wonders so that they remain for the future.

6.10. Three-mark questions with Answers of HOTS Type: (16 Questions)**Three-Mark Descriptive Questions with Answers – HOTS Type:****1. What might happen if mangrove forests in the Sundarbans are destroyed? Explain.**

Answer:

1. The soil may become loose because mangrove roots would no longer hold it together.
2. Waves may wash away more coastal land and increase erosion.
3. People who depend on the mangrove forest for their daily needs may also be affected.

2. How does the experience of the people of North Sentinel Island show the importance of understanding nature?**Answer:**

1. The people of North Sentinel Island survived the tsunami that struck the region in 2004.
2. The chapter suggests that they may have noticed changes in natural signs such as the sea, wind or animals.
3. This shows that a close connection with nature can help people recognise possible dangers.

3. Why should coral reefs be protected even though corals are very small?**Answer:**

1. Tiny corals provide shelter to many different sea creatures.
2. Damage to corals can therefore affect many organisms that depend on them.
3. Protecting corals is important because marine life is important for the whole Earth.

4. How do mangrove roots show that plants can adapt to difficult surroundings?**Answer:**

1. Mangroves grow in wet, muddy and salty land in the Sundarbans.
2. Their special roots help them breathe in muddy salt water.
3. The roots also hold the soil together and help prevent waves from washing the land away.

5. How does the Hargila conservation effort show the importance of community participation?**Answer:**

1. Women are helping protect the Hargila, or Greater Adjutant Stork.
2. They teach children to protect the nests of these birds.
3. This shows how involving both adults and children can strengthen wildlife conservation.

6. Why can living root bridges be considered an example of people working with nature?**Answer:**

1. People use the living roots of trees to form bridges across streams.
2. The roots grow stronger over time until people can walk across them.
3. Thus, people make practical use of natural growth instead of separating themselves from nature.

7. Why are places with species found nowhere else especially important to protect?**Answer:**

1. Some regions contain plants and animals that are not found anywhere else in the world.
2. If their habitats are destroyed, these unique species may lose the places where they naturally live.
3. Therefore, such “nature’s hotspots” need special care and conservation.

8. How can protecting the Western Ghats benefit both people and nature?**Answer:**

1. The Western Ghats contain rich plant and animal life, including plants used in traditional medicine.
2. Tribal and forest-dwelling communities depend on the forests for food, medicine and livelihood.
3. Protecting the forests therefore helps conserve biodiversity as well as resources important to people.

9. Why is recording more than 200 types of mangoes in the Western Ghats important?**Answer:**

1. The survey reveals the great variety of mangoes present in the region.
2. Recording these varieties helps people recognise and learn about local plant diversity.

3. Such surveys can encourage people to value and conserve locally known varieties.

10. What does the Save Silent Valley Movement teach us about environmental conservation?

Answer:

1. A proposed dam threatened to flood part of the special forest in Silent Valley.
2. Villagers, students and scientists came together to oppose the project.
3. Their success shows that collective action can play an important role in protecting valuable natural areas.

11. Why are protected areas important in a biodiversity-rich region like the Western Ghats?

Answer:

1. Protected areas help keep forests, rivers, hills, plants and animals safe.
2. They provide protection to wildlife such as the lion-tailed macaque, tiger, elephant and hornbill.
3. Therefore, protected areas help conserve both individual species and their natural habitats.

12. Compare the role of roots in the Sundarbans and in the living root bridges of Northeast India.

Answer:

1. In the Sundarbans, mangrove roots hold the soil together and help prevent waves from washing away the land.
2. In Northeast India, living tree roots are guided across streams until they become strong enough to form bridges.
3. Both examples show how roots can provide valuable support to nature as well as to people.

13. How does Northeast India show that culture and nature can exist together?

Answer:

1. The region has lush forests, flowing rivers and rich animal and bird life.
2. People's weaving, crafts, music, dance and festivals are closely connected with the hills, forests and wildlife.
3. This relationship shows how human culture can grow in close association with nature.

14. What could be the consequences if unique medicinal plants of the Western Ghats disappeared?

Answer:

1. Plants used in traditional medicine could be lost from the region.
2. Forest-dwelling communities could lose resources that they use for medicine and livelihood.
3. The disappearance of plants unique to the region would also reduce its natural diversity.

15. What common message do the Sundarbans, Hargila conservation and Silent Valley give us?

Answer:

1. The Sundarbans show the importance of living in harmony with and protecting natural ecosystems.
2. Hargila conservation shows how communities can participate in protecting wildlife.
3. Silent Valley demonstrates that collective action can help save important natural habitats.

16. Why does the chapter describe India as “rich, beautiful and connected”?

Answer:

1. Different regions have their own wildlife, trees, people and natural wonders.

2. People may live differently, but they all depend on nature and care for it in their own ways.
3. These relationships connect India's diverse regions through their shared dependence on the natural world.

6.11 Five-mark questions with Answers of LOTS Type: (12 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type:

1. Describe the Andaman and Nicobar Islands and their special natural features.

Answer:

1. Indira Point, located in the Andaman and Nicobar Islands, is the southernmost tip of India.
2. Sri Vijaya Puram is the capital city of the Andaman and Nicobar Islands.
3. The forests of these islands contain unique animals, colourful birds, butterflies and insects.
4. The Andaman wood pigeon and Andaman hornbill are among the special birds found there.
5. The islands also have unique trees, including trees with large supporting roots.

2. Explain the importance and special features of the Sundarbans mangrove forest.

Answer:

1. The Sundarbans is described in the chapter as the largest mangrove forest in the world.
2. It is found where the River Ganga meets the sea, and its land is muddy and salty.
3. Special trees called mangroves grow in this wet and salty land.
4. Mangrove roots hold the soil together and help stop waves from washing the land away.
5. Many local people live close to the forest and depend on it for their daily needs.

3. Describe the natural beauty, culture and wildlife of Northeast India.

Answer:

1. The seven states called the “Seven Sisters,” together with Sikkim, make up Northeast India.
2. Northeast India has lush forests, flowing rivers and many animals and birds.
3. People of the region live closely with nature.
4. Weaving, crafts, music, dance and festivals are closely connected with the hills, forests and wildlife.
5. People also help protect wildlife such as the Hargila, or Greater Adjutant Stork, by protecting its nests.

4. Write five points about the Western Ghats and their biodiversity.

Answer:

1. The Western Ghats are a long chain of forested hills known for their rich plant and animal life.
2. Many plants growing there are used in traditional medicine.
3. Many of these plants grow only in the Western Ghats.
4. Tribal and other forest-dwelling communities depend on the forests for food, medicine and livelihood.
5. A survey involving schools, farmers and experts recorded more than 200 types of mangoes in the Western Ghats.

5. Explain the Save Silent Valley Movement and its importance.

Answer:

1. Silent Valley National Park is located in Kerala and contains rare plants and animals.
2. A dam was planned that would have flooded part of this special forest.
3. Villagers, students and scientists came together to oppose the proposed dam.

4. Their efforts helped stop the dam from being built.
5. As a result, Silent Valley remained a protected forest.

6. What are protected areas? Explain their importance in the Western Ghats.

Answer:

1. Protected areas are special forests, rivers or hills kept safe by the government to protect plants, animals and nature.
2. They include wildlife sanctuaries, national parks and tiger reserves.
3. The Western Ghats have over 50 protected areas.
4. These areas protect animals such as the lion-tailed macaque, tiger, elephant and hornbill.
5. They also help keep the forests and rivers of the Western Ghats healthy.

7. Describe the importance of forests to people living in the Western Ghats.

Answer:

1. Many tribal and other forest-dwelling communities have lived in the Western Ghats for generations.
2. They depend on the forests and plants for food.
3. Many plants found in these hills are used in traditional medicine.
4. Forest resources also support the livelihood of these communities.
5. Thus, the forests are closely connected with the everyday lives of the people living there.

8. What did Shanti learn from her journey through the unique places of India?

Answer:

1. Shanti saw natural wonders ranging from coral reefs in the sea to root bridges in the hills.
2. She learned that every region has its own wildlife, trees, people and natural features.
3. She observed that people in different regions live in different ways.
4. She also learned that people everywhere depend on nature and care for it in their own ways.
5. Her journey showed that everyone must learn about, respect and protect India's natural wonders for the future.

6.12 Five-mark questions with Answers of HOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. Suppose the mangrove forests of the Sundarbans are gradually destroyed. Analyse the possible effects on nature and people.

Answer:

1. Without mangrove roots, the soil would not be held together firmly.
2. Waves could wash away more land and increase coastal erosion.
3. The special habitat provided by the mangrove ecosystem would be disturbed.
4. People who depend on the forest for their daily needs would also be affected.
5. Therefore, protecting mangroves is important for both the environment and the communities living nearby.

2. How does the Hargila conservation effort show that community participation can protect wildlife?

Answer:

1. The Hargila, or Greater Adjutant Stork, needs safe nesting places for its survival.
2. Women in the community are actively helping to protect these birds.
3. They also teach children to help protect Hargila nests.

4. Involving children develops awareness and responsibility towards wildlife from a young age.
5. Thus, the example shows that community participation can contribute significantly to wildlife conservation.

3. Explain how living root bridges are an example of people using nature wisely.

Answer:

1. People make living root bridges by guiding the roots of trees across streams.
2. The roots continue to grow and become strong enough for people to walk on them.
3. This method uses living natural materials rather than depending entirely on artificial construction materials.
4. It demonstrates how people can meet practical needs while working closely with natural processes.
5. Therefore, living root bridges are a good example of people using and caring for nature together.

4. Why should the Western Ghats be protected for both present and future generations?

Answer:

1. The Western Ghats contain rich plant and animal life, including species unique to the region.
2. Many plants found there are valuable for traditional medicine.
3. Tribal and forest-dwelling communities depend on the forests for food, medicine and livelihood.
4. Protected areas in the Western Ghats help conserve animals, forests and rivers.
5. Protecting this region therefore preserves biodiversity and important natural resources for future generations.

5. What lessons can we learn from the Save Silent Valley Movement about development and environmental protection?

Answer:

1. A proposed dam threatened to flood part of the special forest of Silent Valley.
2. Villagers, students and scientists recognised the possible damage and joined together to oppose the project.
3. Their efforts succeeded in stopping the dam and protecting the forest.
4. This shows that the environmental effects of development projects should be considered carefully.
5. The movement demonstrates that development needs and protection of valuable natural areas must be balanced responsibly.

6. Compare the role of roots in the Sundarbans with the role of roots in the living root bridges of Northeast India.

Answer:

1. Mangrove roots in the Sundarbans hold the soil together and help prevent waves from washing away the land.
2. Their special roots also help mangrove trees breathe in muddy salt water.
3. In Northeast India, tree roots are guided across streams to form living root bridges.
4. These roots become strong enough over time for people to walk across them.
5. Both examples show how roots can provide valuable natural solutions for plants, people and their surroundings.

7. Why are regions containing plants and animals found nowhere else especially important to conserve?

Answer:

1. The chapter explains that some plants and animals in the islands and Northeast are not found anywhere else in the world.

2. Such unique biodiversity makes these regions special natural hotspots.
3. If their habitats are damaged, these species may lose the environments on which they depend.
4. Protecting such regions helps preserve their distinctive plants and animals.
5. Therefore, conserving biodiversity hotspots is essential for maintaining India's unique natural heritage.

8. "People and nature are interconnected." Justify this statement using examples from the chapter.

Answer:

1. People in the Sundarbans depend on mangrove forests for their daily needs and have lived in harmony with nature for generations.
2. In Northeast India, people's crafts, music, dance and festivals are closely connected with hills, forests and wildlife.
3. Living root bridges show how people can use growing trees to meet practical needs.
4. Forest-dwelling communities in the Western Ghats depend on forests for food, medicine and livelihood.
5. These examples show that people's lives, culture and livelihoods are closely connected with the natural environment.

9. How can students contribute to protecting biodiversity after learning the lessons of this chapter?

Answer:

1. Students can learn about the plants, animals and natural habitats found in their own locality.
2. They can record local varieties of fruits and vegetables, as suggested by the chapter's activity.
3. They can participate in activities that create awareness about protecting wildlife and their habitats.
4. They can learn from examples such as children helping to protect Hargila nests.
5. By learning, respecting and protecting nature, students can help preserve natural wonders for the future.

10. What overall message does Shanti's journey give about India's diversity and conservation?

Answer:

1. Shanti's journey introduces different natural regions, from coral reefs and mangroves to root bridges and the Western Ghats.
2. Each region has its own wildlife, trees, people and natural wonders.
3. People live differently in different regions, yet all depend on nature in some way.
4. The journey shows that India's diverse regions are naturally and culturally interconnected.
5. Its central message is that everyone must learn about, respect and protect these natural treasures for the future.

6.13 Five-mark questions with Answers of Applied Type: (8 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Imagine that you live in a village near the Sundarbans. What five actions would you take to protect the mangrove forest and your village?

Answer:

1. I would avoid cutting or damaging mangrove trees because their roots hold the soil together.

2. I would encourage people to protect mangroves because they help stop waves from washing the land away.
3. I would use forest resources carefully because local people depend on the forest for their daily needs.
4. I would explain to others how mangrove roots help the trees survive in muddy and salty conditions.
5. I would encourage the community to continue living in harmony with the mangrove ecosystem.

2. Your school wants to start a campaign to protect a rare bird in your locality. How would you apply the lesson of Hargila conservation?

Answer:

1. I would first create awareness among students about the bird and the importance of protecting it.
2. I would encourage students and local people to protect its nesting places.
3. I would involve parents and community members so that conservation becomes a collective effort.
4. I would organise activities through which older students can teach younger children about protecting birds and nests.
5. I would follow the example of the Hargila conservation effort, where women teach children to protect the bird's nests.

3. Suppose a coral reef near an island is being damaged by careless human activities. What measures would you suggest to protect it?

Answer:

1. I would create awareness that corals are tiny sea animals that form important reef habitats.
2. I would ask visitors not to touch, break or damage corals.
3. I would encourage people to keep the surrounding marine environment clean.
4. I would explain that many sea creatures depend on coral reefs for shelter.
5. I would promote responsible behaviour because protecting coral reefs also helps protect marine life.

4. A development project is proposed near an important forest in your area. How would you apply the lesson of the Save Silent Valley Movement?

Answer:

1. I would first study how the proposed project could affect the forest, plants and animals.
2. I would create awareness among students and local people about the environmental importance of the area.
3. I would encourage people, students and experts to discuss the possible environmental damage.
4. I would request the concerned authorities to consider the environmental impact before making a decision.
5. I would remember the Save Silent Valley Movement, where villagers, students and scientists worked together to protect a valuable forest from being flooded by a proposed dam.

5. Your class is asked to conduct a biodiversity survey similar to the mango survey mentioned in the chapter. How would you carry it out?

Answer:

1. I would select a locally available fruit or plant, such as mango, jackfruit or jamun, for the survey.
2. I would ask family members, farmers and other local people about the different varieties they know.

3. I would record the names and special features of each variety in a notebook or table.
4. I would compare the information collected by different students and prepare a combined class record.
5. I would use the survey to understand and appreciate the diversity of plants found in our locality.

6. Suppose a forest near your town contains rare plants and animals. How would you help conserve it?

Answer:

1. I would learn about the special plants and animals found in the forest.
2. I would avoid activities that damage trees, wildlife or their habitats.
3. I would create awareness among others about the importance of protecting the forest.
4. I would support efforts to keep important natural areas protected from harmful activities.
5. I would apply the lesson of the Western Ghats, where protected areas help conserve animals, forests and rivers.

7. Imagine that people in your village depend on a nearby forest for food and medicinal plants. How would you encourage them to use the forest responsibly?

Answer:

1. I would explain that the forest provides valuable food, medicine and livelihood resources.
2. I would encourage people to collect only what they need and avoid unnecessary damage to plants.
3. I would ask them to protect plants that are locally important for traditional medicine.
4. I would encourage younger generations to learn about the useful plants and the importance of conserving them.
5. I would relate this to the Western Ghats communities that depend on forests and plants for food, medicine and livelihood.

8. After studying Shanti's journey, your class is asked to prepare a "Protect Nature" action plan. What five points would you include?

Answer:

1. We would learn about the unique plants, animals and natural wonders found in different regions.
2. We would respect wildlife and avoid disturbing their natural habitats.
3. We would use forests and other natural resources carefully.
4. We would create awareness among our families and communities about the need for conservation.
5. We would follow the chapter's message of learning about, respecting and protecting nature for future generations.

6.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

Below are **30 MCQs** designed to test knowledge, understanding, reasoning, application, comparison, and inference from the uploaded chapter.

1. Indira Point is important because it is:

- A. the southernmost point of the Indian mainland
- B. the southernmost tip of India
- C. the largest island in India
- D. the capital of the Andaman and Nicobar Islands

Answer: B. the southernmost tip of India

2. Which statement correctly defines an island?

- A. Land surrounded by mountains on all sides
- B. Land surrounded by water on three sides
- C. Land surrounded by water on all sides
- D. Land located only in an ocean

Answer: C. Land surrounded by water on all sides

3. Which of the following is correctly matched?

- A. Sri Vijaya Puram — Sundarbans
- B. Indira Point — Andaman and Nicobar Islands
- C. Kanyakumari — Northeast India
- D. Silent Valley — Andaman Islands

Answer: B. Indira Point — Andaman and Nicobar Islands

4. A student observes a tree with large supporting roots in an island forest. What is the most likely advantage of such roots?

- A. They help provide additional support to the tree.
- B. They help the tree fly during storms.
- C. They change the tree into a climber.
- D. They prevent the tree from producing leaves.

Answer: A. They help provide additional support to the tree.

5. Why should a person wear a life jacket while travelling by ferry even if the person knows swimming?

- A. It helps the ferry move faster.
- B. It is an important safety measure during water travel.
- C. It helps a person see underwater.
- D. It prevents seasickness.

Answer: B. It is an important safety measure during water travel.

6. If coral reefs in an area are severely damaged, which consequence is most likely according to the chapter?

- A. More mangrove trees will immediately grow there.
- B. Many marine creatures may lose their shelter.
- C. Rivers will stop flowing into the sea.
- D. Islands will turn into mountains.

Answer: B. Many marine creatures may lose their shelter.

7. Which aquatic animal is correctly matched with its characteristic?

- A. Seahorse — swims upright
- B. Starfish — has eight arms and changes colour
- C. Octopus — has a hard shell and returns to its birth beach
- D. Jellyfish — smart mammal that lives in groups

Answer: A. Seahorse — swims upright

8. Which aquatic creature can regrow its arms and has no brain?

- A. Dolphin
- B. Starfish

- C. Turtle
- D. Clownfish

Answer: B. Starfish

9. Which pair of characteristics belongs to the octopus?

- A. Hard shell and returns to its birth beach
- B. Eight arms and ability to change colour
- C. Transparent body and stinging tentacles
- D. Swims upright and lives among anemones

Answer: B. Eight arms and ability to change colour

10. The chapter's discussion of the North Sentinel Islanders surviving the 2004 tsunami mainly highlights the possible importance of:

- A. building large dams
- B. observing and understanding natural signs
- C. travelling frequently by ship
- D. constructing artificial islands

Answer: B. observing and understanding natural signs

11. The Sundarbans is especially suitable for mangroves because the land there is:

- A. dry and sandy
- B. rocky and cold
- C. muddy and salty
- D. snowy and mountainous

Answer: C. muddy and salty

12. Which sequence best explains how mangroves help protect coastal land?

- A. Roots hold soil → soil remains together → less land is washed away
- B. Roots cut soil → waves increase → land disappears
- C. Leaves stop rivers → soil dries → waves disappear
- D. Flowers absorb seawater → islands become larger

Answer: A. Roots hold soil → soil remains together → less land is washed away

13. If mangrove roots were removed from a coastal region, which problem would most directly increase?

- A. Soil being washed away by waves
- B. Formation of mountain ranges
- C. Growth of coral reefs
- D. Formation of freshwater lakes

Answer: A. Soil being washed away by waves

14. The people of the Sundarbans provide an example of:

- A. complete independence from natural resources
- B. living in harmony with nature
- C. avoiding forests completely
- D. replacing forests with cities

Answer: B. living in harmony with nature

15. The Seven Sisters together with _____ make up Northeast India as described in the chapter.

- A. Kerala
 - B. Sikkim
 - C. Goa
 - D. Karnataka
- Answer: B. Sikkim**

16. The Hargila mentioned in the chapter is another name for the:

- A. Andaman hornbill
- B. Indian Giant Squirrel
- C. Greater Adjutant Stork
- D. lion-tailed macaque

Answer: C. Greater Adjutant Stork

17. Women teaching children to protect Hargila nests is best classified as:

- A. community-based wildlife conservation
- B. industrial development
- C. marine transportation
- D. agricultural mechanisation

Answer: A. community-based wildlife conservation

18. Bhut Jolokia is especially interesting because it:

- A. is a medicinal tree found only in mangroves
- B. is one of the hottest chillies and can help keep elephants away from crops
- C. grows underwater around coral reefs
- D. is used to make living root bridges

Answer: B. is one of the hottest chillies and can help keep elephants away from crops

19. Which example best illustrates people working *with* living plants to solve a practical problem?

- A. Tiger masks
- B. Living root bridges
- C. Ferry life jackets
- D. Coral displays

Answer: B. Living root bridges

20. Living root bridges become useful mainly because:

- A. tree roots are guided across streams and become stronger over time
- B. tree branches immediately turn into wooden roads
- C. mangrove leaves are tied together
- D. coral reefs grow across rivers

Answer: A. tree roots are guided across streams and become stronger over time

21. Why are the islands and Northeast India described as “nature's hotspots” in the chapter?

- A. They have the highest temperatures in India.
- B. They contain plants and animals not found anywhere else.
- C. They contain only tropical crops.
- D. They have no human settlements.

Answer: B. They contain plants and animals not found anywhere else.

22. Which animal is especially associated with the Western Ghats in the chapter?

- A. Lion-tailed macaque
- B. Seahorse
- C. Hargila
- D. Clownfish

Answer: A. Lion-tailed macaque

23. A survey records more than 200 types of mangoes in a region. What does this most strongly indicate?

- A. Lack of plant diversity
- B. Rich local plant diversity
- C. Absence of forests
- D. Lack of traditional knowledge

Answer: B. Rich local plant diversity

24. Which statement best explains the importance of Western Ghats forests to local communities?

- A. They are used only for tourism.
- B. They provide food, medicine and livelihood resources.
- C. They contain no useful plants.
- D. People are not allowed to live near them.

Answer: B. They provide food, medicine and livelihood resources.

25. What was the major environmental concern associated with the proposed dam in Silent Valley?

- A. It would have turned the forest into a desert.
- B. It would have flooded a large part of the forest.
- C. It would have created a new island.
- D. It would have increased coral growth.

Answer: B. It would have flooded a large part of the forest.

26. Which group combination played an important role in the Save Silent Valley Movement?

- A. Villagers, students and scientists
- B. Sailors, fishermen and pilots
- C. Tourists, traders and athletes
- D. Doctors, engineers and shopkeepers

Answer: A. Villagers, students and scientists

27. The Western Ghats have over 50 protected areas. Which combination represents the types mentioned in the chapter?

- A. Sanctuaries, national parks and tiger reserves
- B. Ports, harbours and airports
- C. Farms, factories and mines
- D. Dams, canals and reservoirs

Answer: A. Sanctuaries, national parks and tiger reserves

28. A student says, “Indira Point and Kanyakumari mean exactly the same thing geographically.” Which correction is most accurate?

- A. Both are capitals of island groups.

- B. Indira Point is the southernmost tip of India, while Kanyakumari is the southernmost point of the Indian mainland.
 C. Kanyakumari is farther south than Indira Point.
 D. Both are located in the Sundarbans.

Answer: B. Indira Point is the southernmost tip of India, while Kanyakumari is the southernmost point of the Indian mainland.

29. Which of the following best represents a common idea connecting the Sundarbans, Hargila conservation and the Western Ghats?

- A. Nature can survive only when humans completely leave an area.
 B. People and nature are interconnected, and conservation requires care and responsible action.
 C. All natural regions should be developed in the same way.
 D. Wildlife conservation is useful only in national parks.

Answer: B. People and nature are interconnected, and conservation requires care and responsible action.

30. After studying Shanti's journey, which action best reflects the central message of the chapter?

- A. Visit natural places only for entertainment.
 B. Collect rare plants and animals as souvenirs.
 C. Learn about, respect and protect natural places for future generations.
 D. Replace natural habitats with artificial attractions.

Answer: C. Learn about, respect and protect natural places for future generations.

6.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities While Teaching Chapter 6 – *Some Unique Places*:

The following practices can make the chapter more **experiential, engaging, competency-based, and conservation-oriented** for students.

- (1) **Map-Based Learning:** Use a physical or digital map of India and ask students to locate **Andaman and Nicobar Islands, Indira Point, Sundarbans, Northeast India, Western Ghats, Silent Valley and Kanyakumari**. This helps students connect the unique natural features discussed in the chapter with their geographical locations.
- (2) **Nature–People Connection Chart:** Ask students to prepare a chart with three columns—**Place, Special Natural Feature, and How People Live with Nature**. Examples can include mangroves in the Sundarbans, Hargila conservation in Northeast India, living root bridges, and forest-based livelihoods in the Western Ghats.
- (3) **Learning Through Models:** Encourage groups to prepare simple models of a **mangrove ecosystem, coral reef, living root bridge, or island** using eco-friendly/reusable materials. Students should explain the importance of the feature represented in their model rather than merely displaying it.
- (4) **Local Biodiversity Survey:** Extend the chapter's idea of recording varieties of mango, jackfruit and jamun by asking students to identify varieties available in their locality. They can collect names from parents, grandparents, farmers or neighbours and prepare a class biodiversity register.
- (5) **Conservation Case-Study Discussion:** Use the **Save Silent Valley Movement** as a classroom case study. Ask students to identify the environmental problem, people involved, action taken and outcome, helping them understand the role of collective action in conservation.

- (6) **Think–Pair–Share:** Give questions such as, “*What would happen if mangroves disappeared?*”, “*Why should coral reefs be protected?*” or “*How can children help protect wildlife?*” Students first think individually, discuss with a partner, and finally share their conclusions with the class.
- (7) **Peer Teaching Through Expert Groups:** Divide the class into groups such as **Island Explorers, Mangrove Experts, Northeast Nature Team, Western Ghats Researchers, and Conservation Champions**. Each group studies one section and teaches its important points to the rest of the class.
- (8) **Learning Through Comparison:** Encourage students to compare **Indira Point and Kanyakumari, mangrove roots and living root bridges, or Sundarbans and Western Ghats**. Comparison activities strengthen observation, classification and analytical skills.
- (9) **Conservation Pledge and Action:** At the end of the chapter, each student can write one practical action they will follow—such as protecting plants, avoiding littering, respecting wildlife or conserving local biodiversity. This directly reinforces the chapter's message to **learn about, respect and protect nature for the future**.
- (10) **Competency-Based Assessment:** Instead of testing only factual recall, include map work, picture identification, “what-if” situations, cause-and-effect questions, case studies and real-life conservation problems. This provides opportunities to assess **observation, reasoning, application, environmental awareness and problem-solving skills** along with subject knowledge.

6.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities While Teaching-Learning Chapter 6 – Some Unique Places For 5th Standard Students:

- (1) **Virtual India Explorer:** Create a classroom “virtual journey” following the places in the chapter—**Andaman and Nicobar Islands, Sundarbans, Northeast India, Western Ghats and Kanyakumari**. Students can place picture cards on a large India map and explain one unique feature of each destination.
- (2) **Build-a-Mangrove Challenge:** Let students create a simple mangrove model using clay, twigs, paper and reusable materials. They can experiment with different “root” arrangements to understand how mangrove roots hold soil together and help protect land from waves.
- (3) **Living Root Bridge STEM Challenge:** Students can design miniature bridge models inspired by the **living root bridges of Northeast India** using strings, flexible sticks or paper strips. The activity can include a small load-testing challenge to connect environmental learning with basic engineering thinking.
- (4) **Young Biodiversity Detective Project:** Give students a “Biodiversity Detective Card” to record different varieties of **mango, jackfruit, jamun or other local plants** they observe or learn about from family members. The class can combine the findings into its own **Local Biodiversity Register**, inspired by the survey described in the chapter.
- (5) **Hargila Conservation Role-Play:** Students can take the roles of the **Hargila bird, children, community members and conservation volunteers** and enact how nests can be protected. This transforms the chapter's community-conservation example into an engaging learning experience.
- (6) **Coral Reef in a Box:** Groups can create a colourful three-dimensional coral reef ecosystem inside a cardboard box. They can add corals and marine animals and explain how tiny corals provide shelter to many sea creatures.

- (7) **“What If?” Problem-Solving Cards:** Give groups situation cards such as **“What if mangroves disappeared?”**, **“What if coral reefs were damaged?”**, or **“What if a forest containing rare species was going to be flooded?”** Students discuss consequences and propose solutions, developing HOTS and environmental problem-solving skills.
- (8) **Save Silent Valley Mini Parliament:** Conduct a child-friendly classroom discussion based on the proposed dam in Silent Valley. Students can represent villagers, students, scientists and decision-makers and discuss how development and forest protection should be considered together.
- (9) **Nature and Culture Digital Storytelling:** Groups can prepare a short narrated slide show, poster story or simple video showing how people in Northeast India connect **weaving, crafts, music, dance and festivals** with their natural surroundings.
- (10) **“My Unique Place” Creative Project:** Each student selects one unique place from the chapter and creates a mini project containing its **location, special plants/animals, natural feature, people–nature connection and one conservation message**. The projects can be displayed together as a classroom **“Museum of India's Unique Places.”**
- (11) **QR-Code Learning Stations:** The teacher can set up learning stations for **islands, corals, mangroves, Hargila, living root bridges, Western Ghats and Silent Valley**, with teacher-created QR codes linking to approved pictures, short videos or student-made explanations. Students rotate between stations and complete a discovery sheet.
- (12) **Young Conservationist Challenge:** At the end of the chapter, students can design their own **“Protect Nature” badge, slogan or mini-poster** and propose one action they can practise at home or school. This creatively reinforces the chapter's concluding message of **learning about, respecting and protecting nature for the future**.

6.17: Practicing Questions/Question Bank

A. Fill in the Blanks – 1 Mark Each:

1. _____ is the southernmost tip of India.
Answer: Indira Point
2. A piece of land surrounded by water on all sides is called an _____.
Answer: island
3. _____ is the capital of the Andaman and Nicobar Islands.
Answer: Sri Vijaya Puram
4. The _____ is described as the largest mangrove forest in the world.
Answer: Sundarbans
5. The Sundarbans is located where the River _____ meets the sea.
Answer: Ganga
6. Special trees growing in the muddy and salty land of the Sundarbans are called _____.
Answer: mangroves
7. Mangrove roots help hold the _____ together.
Answer: soil
8. The Greater Adjutant Stork is locally known as _____.
Answer: Hargila

9. Bhut Jolokia is also known as the _____ pepper.
Answer: ghost
 10. The _____ are a long chain of forested hills rich in plant and animal life.
Answer: Western Ghats
 11. More than _____ types of mangoes were recorded in a survey mentioned in the chapter.
Answer: 200
 12. _____ Valley is an important protected forest in Kerala.
Answer: Silent
 13. _____ is the southernmost point of the Indian mainland.
Answer: Kanyakumari
 14. The lion-tailed _____ is found in the Western Ghats.
Answer: macaque
 15. Sikkim was the first Indian state to become fully _____.
Answer: organic
-

B. One-Mark Descriptive Questions:

1. **What is an island?**
Answer: An island is a piece of land surrounded by water on all sides.
2. **What is Indira Point?**
Answer: Indira Point is the southernmost tip of India.
3. **Name two special birds of the Andaman Islands.**
Answer: The Andaman wood pigeon and Andaman hornbill.
4. **Why should passengers wear life jackets while travelling by ferry?**
Answer: Life jackets help keep passengers safe during emergencies in water.
5. **What are corals?**
Answer: Corals are tiny sea animals that form reefs and provide homes to many marine creatures.
6. **What are mangroves?**
Answer: Mangroves are special trees that can grow in muddy and salty coastal areas.
7. **What is Hargila?**
Answer: Hargila is the local name for the Greater Adjutant Stork.
8. **What is Bhut Jolokia?**
Answer: Bhut Jolokia, or ghost pepper, is one of the hottest chillies in the world.
9. **What are living root bridges?**
Answer: They are bridges formed by guiding living tree roots across streams until the roots become strong enough to walk on.
10. **Why are the Western Ghats special?**
Answer: The Western Ghats are rich in different kinds of plants and animals.

11. What was the purpose of the Save Silent Valley Movement?

Answer: It aimed to protect the Silent Valley forest from being flooded by a proposed dam.

12. What are protected areas?

Answer: They are natural areas kept safe to protect plants, animals and their habitats.

C. Two-Mark Descriptive Questions:**1. Write two features of the Sundarbans.**

Answer:

1. The Sundarbans is described as the largest mangrove forest in the world.
2. It is located where the River Ganga meets the sea.

2. How do mangrove roots help the environment?

Answer:

1. They hold the soil together.
2. They help prevent waves from washing the land away.

3. Why are coral reefs important?

Answer:

1. Corals provide shelter to many marine creatures.
2. They form an important part of marine life.

4. Write two facts about Hargila conservation.

Answer:

1. Hargila is the Greater Adjutant Stork.
2. Women teach children to help protect its nests.

5. How do people of the Western Ghats depend on forests?

Answer:

1. They obtain food and medicine from forests.
2. Forest resources also support their livelihoods.

6. Why are living root bridges special?

Answer:

1. They are made by guiding the living roots of trees across streams.
2. The roots grow stronger over time and form usable bridges.

7. Distinguish between Indira Point and Kanyakumari.

Answer:

1. Indira Point is the southernmost tip of India.
2. Kanyakumari is the southernmost point of the Indian mainland.

8. What lesson do we learn from the Save Silent Valley Movement?

Answer:

1. People can work together to protect important forests.
 2. Development activities should consider their effects on nature.
-

D. Three-Mark Descriptive Questions:

1. **Explain three important functions/features of mangrove roots.**

Answer:

1. They hold the soil together.
2. They help prevent waves from washing away the land.
3. Their special roots help mangroves breathe in muddy salt water.

2. **Describe the relationship between the people of Northeast India and nature.**

Answer:

1. People live closely with forests, rivers and wildlife.
2. Their weaving, crafts, music and dance are connected with nature.
3. Their festivals are also connected with the hills, forests and wildlife.

3. **Explain how local communities help protect Hargila birds.**

Answer:

1. Community members work to protect the Hargila.
2. Women teach children about protecting the birds.
3. Children are encouraged to help protect their nests.

4. **Why should the Western Ghats be protected?**

Answer:

1. They contain rich plant and animal life.
2. They contain plants used in traditional medicine.
3. Forest communities depend on them for food, medicine and livelihood.

5. **Explain the Save Silent Valley Movement.**

Answer:

1. A proposed dam threatened to flood a part of Silent Valley forest.
2. Villagers, students and scientists came together to oppose the project.
3. Their efforts helped save the forest.

6. **What could happen if mangrove forests were destroyed?**

Answer:

1. The soil could become more easily washed away.
2. Coastal land could face greater damage from waves.
3. People who depend on the forest for their needs could also be affected.

E. Five-Mark Descriptive Questions:

1. **Describe the Sundarbans and explain the importance of its mangrove forests.**

Answer:

1. The Sundarbans is described as the world's largest mangrove forest.
2. It lies where the River Ganga meets the sea.
3. Mangroves grow in its muddy and salty land.
4. Their roots hold the soil together and help stop waves from washing away the land.
5. Local people also depend on the mangrove forest for their daily needs.

2. **Explain the natural and cultural richness of Northeast India.**

Answer:

1. Northeast India has lush forests, rivers and rich wildlife.
2. People of the region live closely with nature.
3. Their weaving, crafts, music, dance and festivals are connected with nature.
4. Communities help protect wildlife such as the Hargila.
5. The region also has interesting natural and cultural features such as Bhut Jolokia and living root bridges.

3. **Explain the importance of the Western Ghats to people and wildlife.**

Answer:

1. The Western Ghats are forested hills rich in plant and animal life.
2. They are home to special wildlife such as the lion-tailed macaque.
3. Many plants of the region are used in traditional medicine.
4. Forest communities depend on the forests for food, medicine and livelihood.
5. Protected areas help conserve the forests, rivers and wildlife of the region.

4. **“People can play an important role in conservation.” Explain with examples from the chapter.**

Answer:

1. People of the Sundarbans have lived in harmony with the mangrove forest for generations.
2. Women in Northeast India teach children to protect Hargila nests.
3. Communities maintain a close relationship with natural resources.
4. Villagers, students and scientists joined together in the Save Silent Valley Movement.
5. These examples show that community participation is important for protecting nature.

5. **What lessons about nature and conservation can we learn from Shanti's journey?**

Answer:

1. Different parts of India have unique plants, animals and natural features.
2. People in different regions have different ways of living with nature.
3. Human life and natural resources are closely connected.
4. Natural habitats and wildlife need care and protection.
5. We should learn about, respect and protect nature for future generations.



5th Standard World Around Us Book Chapter 7

Chapter 7: Energy — How Things Work

7.1 Summary of the Chapter:

Summary – Chapter 7: Energy—How Things Work:

- (1) **Energy makes things work.** It enables things to **move, produce light and sound, do work, and become warmer or cooler.**
- (2) Energy exists in different forms. The chapter demonstrates **movement energy, sound energy and heat energy** through activities such as a balloon rocket, rubber-band guitar and Sun-powered water warmer.
- (3) **Food is a source of energy for living things.** Humans and animals obtain energy from food to move, run, fly, swim, think and perform other activities.
- (4) **Fuels provide energy** for many everyday activities. Petrol and diesel are used in vehicles, while cooking gas, wood and coal may be used for cooking.
- (5) **Electricity is an important form of energy** used in homes, schools and industries. It can produce **movement, sound, light and heat** and helps machines and appliances perform different tasks.
- (6) Electricity must be **used safely.** Children should avoid touching plugged-in wires, inserting objects into sockets, playing near transformers or attempting to repair electrical problems themselves.
- (7) Burning fuels such as **coal causes smoke and harmful gases**, which pollute the air and affect health and the environment. Therefore, cleaner sources of energy should be preferred.
- (8) **The Sun, wind and flowing water are natural sources of energy.** The chapter demonstrates their ability to do work through activities involving a pinwheel, focused sunlight and a water wheel.
- (9) **Solar panels, windmills and moving water can generate electricity.** Electricity produced using the Sun, wind and water is described as **clean energy** because it does not pollute the planet with smoke or waste.
- (10) **Energy should be used and saved wisely.** The chapter encourages students to conserve energy, improve energy efficiency and choose clean sources whenever possible to protect the Earth.

7.2 Important Formulas:

Important Formulas – Chapter 7: Energy—How Things Work:

The chapter is mainly **conceptual and activity-based**. It does **not introduce any specific mathematical formulas or numerical equations** for solving quantitative problems. The focus is on identifying sources, forms, uses, conservation, and efficiency of energy.

However, the following simple quantitative relationships may be useful when framing **application-based numerical questions** from the chapter:

No.	Concept	Useful Relationship
1	Energy consumption	Energy used = Power $\times$ Time
2	Electrical energy	$E = P \times t$
3	Power	$P = \frac{E}{t}$
4	Time	$t = \frac{E}{P}$

No.	Concept	Useful Relationship
5	Electricity units	1 unit of electricity = 1 kWh
6	Kilowatt-hour	1 kWh = 1000 Wh
7	Energy saving	Energy saved = Energy used before – Energy used after
8	Fuel efficiency of vehicle	Mileage = Distance travelled ÷ Fuel consumed
9	Fuel required	Fuel consumed = Distance travelled ÷ Mileage
10	Distance travelled	Distance = Mileage × Fuel consumed

Note: Formulas 1–7 are **not explicitly taught in the uploaded chapter**; they are optional extensions for creating quantitative problems. The chapter does, however, explicitly introduce **energy efficiency** as using less energy to do the same work and gives the example of LED bulbs using less electricity.

The most directly relevant quantitative idea in the chapter is **vehicle mileage**. The “Let us reflect” section asks students to find how many kilometres a vehicle travels per litre of petrol or diesel and compare different vehicles.

7.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)

LOTS – Fill in the Blanks with Answers:

- Something that makes things move, light up, produce sound or do work is called _____.
Answer: Energy
- The _____ gives us light and heat.
Answer: Sun
- Energy can make things move, produce sound, do work and change _____.
Answer: Temperature
- When air rushes out of an inflated balloon, it pushes the balloon _____.
Answer: Forward
- The movement of _____ can generate energy.
Answer: Air
- Plucking stretched rubber bands makes them _____.
Answer: Vibrate
- Vibrating rubber bands produce _____ energy.
Answer: Sound
- Water kept in sunlight becomes warmer because the Sun provides _____.
Answer: Heat
- The food we eat gives us the _____ we need to perform activities.
Answer: Energy
- Our _____ uses energy even when we are sitting, sleeping or thinking.
Answer: Brain
- _____ is a source of energy for all living things.
Answer: Food
- Animals need energy to move, fly, swim, run and find _____.
Answer: Food
- Petrol and diesel are examples of _____ used by vehicles.
Answer: Fuels

14. Cooking _____ is a fuel commonly used in homes.
Answer: Gas
15. Burning wood or coal produces smoke and _____.
Answer: Pollution
16. In a diya, _____ acts as the fuel that helps the wick burn longer.
Answer: Oil
17. A fan requires _____ to work.
Answer: Electricity
18. Electricity can be used to produce movement, sound, light and _____.
Answer: Heat
19. We should never put our fingers or other objects into electrical _____.
Answer: Sockets
20. Children should not play near electric boxes or _____.
Answer: Transformers
21. Using less energy to do the same work is called energy _____.
Answer: Efficiency
22. _____ bulbs use less electricity to provide the same amount of light.
Answer: LED
23. Burning _____ to generate electricity produces smoke and harmful gases.
Answer: Coal
24. Wind makes a _____ rotate in the activity given in the chapter.
Answer: Pinwheel
25. The Sun, wind and _____ are natural sources of energy.
Answer: Water
26. The _____ is the main source of energy for life on Earth.
Answer: Sun
27. Solar panels capture sunlight and convert it into _____.
Answer: Electricity
28. _____ spin with the wind to generate electricity.
Answer: Windmills
29. Fast-moving rivers or falling water can be used to generate _____.
Answer: Electricity
30. Energy obtained from natural sources such as the Sun, wind and water without causing pollution is called _____ energy.
Answer: Clean
31. Batteries contain _____ energy.
Answer: Stored
32. Our body also stores energy for _____ use.
Answer: Future
33. We should use and _____ energy wisely.
Answer: Save
34. Clean energy from the Sun, wind and water does not _____ the Earth.
Answer: Pollute
35. We should choose _____ sources of energy whenever possible.
Answer: Clean

7.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)**HOTS – Fill in the Blanks with Answers:**

1. Riya releases an inflated balloon and it moves forward. This happens because the escaping _____ pushes the balloon in the opposite direction.
Answer: Air
2. If two identical cups of water are kept in sunlight and shade, the cup in the _____ will become warmer.
Answer: Sunlight
3. A wet cloth kept in sunlight dries faster than one kept in shade because it receives more _____ energy.
Answer: Heat
4. When a stretched rubber band is plucked, its vibrations produce _____ energy.
Answer: Sound
5. If a rubber band stops vibrating, the _____ produced by it will also stop.
Answer: Sound
6. Aman feels tired when he is hungry but becomes active after eating. This shows that _____ provides energy to our body.
Answer: Food
7. A bird needs energy to fly and a fish needs energy to swim. Both obtain this energy from _____.
Answer: Food
8. A scooter stops after its petrol tank becomes empty because it no longer has the required _____ to provide energy.
Answer: Fuel
9. If a diya has a wick but no oil, it will not burn for long because it lacks _____.
Answer: Fuel
10. Using too much wood and coal for cooking can increase air _____.
Answer: Pollution
11. If electricity is unavailable, an electric fan cannot produce the required _____ to blow air.
Answer: Movement
12. A bulb produces light while a fan produces movement, although both can use _____ as their source of energy.
Answer: Electricity
13. Replacing an ordinary bulb with an LED bulb can reduce electricity consumption because LEDs are more energy _____.
Answer: Efficient
14. If a child notices a broken electrical wire, the safest action is to stay away and inform an _____.
Answer: Adult
15. If a pinwheel is held in moving air, it rotates, showing that _____ can provide energy for movement.
Answer: Wind
16. When flowing water makes a water wheel rotate, _____ energy is responsible for the movement.
Answer: Water
17. A sailing boat can move without petrol or electricity by making use of _____.
Answer: Wind
18. A house fitted with solar panels can use _____ to generate electricity.
Answer: Sunlight

19. On a windy day, a windmill can generate electricity because its blades are turned by the _____.
Answer: Wind
20. A place with fast-moving rivers can use the movement of _____ to generate electricity.
Answer: Water
21. Solar energy is preferable to coal-based energy because solar energy does not produce smoke or _____.
Answer: Waste
22. Electricity produced from the Sun, wind or water is called _____ energy because it does not pollute the planet with smoke or waste.
Answer: Clean
23. A torch can work even when it is not connected to an electrical socket because its batteries contain _____ energy.
Answer: Stored
24. A person can still walk even after skipping a meal because the body can use previously _____ energy.
Answer: Stored
25. A house with well-placed windows may need less artificial lighting because it can make better use of natural _____.
Answer: Sunlight
26. A well-designed house with suitable openings can stay airy by making better use of natural _____.
Answer: Wind
27. If we choose an LED bulb that gives the same light using less electricity, we are practising energy _____.
Answer: Efficiency
28. If two vehicles travel the same distance but one uses less petrol, the vehicle using less fuel makes more _____ use of energy.
Answer: Efficient
29. Using solar and wind energy instead of coal can help reduce _____ pollution.
Answer: Air
30. Choosing energy from the Sun, wind and water whenever possible helps us protect the _____.
Answer: Earth

7.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

- What is energy?**
Answer: Energy is what makes things move, light up, produce sound, do work and change temperature.
- What are the two forms of energy we get from the Sun?**
Answer: We get **light and heat energy** from the Sun.
- How does an inflated balloon move when released?**
Answer: The balloon moves forward because the air rushing out of it pushes it forward.
- What type of energy is produced by vibrating rubber bands?**
Answer: Vibrating rubber bands produce **sound energy**.

5. **Why does water kept in sunlight become warm?**
Answer: Water kept in sunlight becomes warm because the Sun provides **heat energy**.
6. **What gives our body energy to perform activities?**
Answer: The **food we eat** gives our body energy to perform activities.
7. **Does our brain use energy while we are sleeping?**
Answer: Yes, our brain uses energy even when we are sleeping.
8. **From where do animals get energy?**
Answer: Animals get the energy they need from **food**.
9. **Name two fuels used in vehicles.**
Answer: **Petrol and diesel** are two fuels used in vehicles.
10. **Name one fuel commonly used for cooking at home.**
Answer: **Cooking gas** is a fuel commonly used for cooking at home.
11. **Why should wood and coal be used carefully?**
Answer: Wood and coal should be used carefully because burning them creates **smoke and pollution**.
12. **What acts as fuel in an oil diya?**
Answer: **Oil** acts as the fuel in an oil diya.
13. **Name any one device that uses electricity for movement.**
Answer: A **fan** uses electricity to produce movement.
14. **What can electricity be used to produce?**
Answer: Electricity can be used to produce **movement, sound, light and heat**.
15. **What should you do if you see a broken electrical wire?**
Answer: We should stay away from a broken electrical wire and immediately inform an adult.
16. **What is energy efficiency?**
Answer: Energy efficiency means **using less energy to do the same work**.
17. **Why are LED bulbs considered energy efficient?**
Answer: LED bulbs are energy efficient because they provide the same amount of light while using less electricity.
18. **What happens when coal is burned to generate electricity?**
Answer: Burning coal produces **smoke and harmful gases that pollute the air**.
19. **What happens when a pinwheel is placed in the wind?**
Answer: A pinwheel **rotates** when it is placed in the wind.
20. **What happens when flowing water is poured onto a water wheel?**
Answer: Flowing water makes the **water wheel spin**.
21. **Name three natural sources of energy discussed in the chapter.**
Answer: The **Sun, wind and water** are three natural sources of energy.
22. **What is the main source of energy for life on Earth?**
Answer: The **Sun** is the main source of energy for life on Earth.
23. **How did ancient sailing ships use wind energy?**
Answer: Ancient sailing ships used wind to push their large sails and travel across the seas.
24. **What do solar panels do?**
Answer: Solar panels **capture sunlight and turn it into electricity**.
25. **How do windmills help generate electricity?**
Answer: Windmills spin with the wind to generate electricity.
26. **How can flowing water be used as a source of energy?**
Answer: Fast-moving rivers or falling water can be used to generate electricity.

27. What is clean energy?

Answer: Clean energy is energy generated from natural sources such as the **Sun, wind and water without polluting the planet with smoke or waste.**

28. Can vehicles run on electricity?

Answer: Yes, vehicles can also run on **electricity.**

29. What type of energy is present in batteries?

Answer: Batteries contain **stored energy.**

30. Why should we choose clean sources of energy whenever possible?

Answer: We should choose clean sources because they provide energy without harming or polluting the Earth.

7.6 One-mark questions with Answers of HOTS Type: (30 Questions)
One-Mark Descriptive Questions with Answers – HOTS Type:
1. Why does an inflated balloon move when its mouth is released?

Answer: The balloon moves because the air rushing out pushes it forward.

2. What would happen if less air were filled into a balloon rocket?

Answer: The balloon rocket would have less escaping air available to push it forward.

3. Why does a plucked rubber band produce sound?

Answer: A plucked rubber band produces sound because it vibrates.

4. Why does water kept in sunlight become warmer than water kept in shade?

Answer: Water in sunlight becomes warmer because it receives heat energy from the Sun.

5. Why may a hungry person feel tired?

Answer: A hungry person may feel tired because food provides the energy needed by the body.

6. Why do animals need food even if they do not perform human activities?

Answer: Animals need food for energy to move, fly, swim, find food and protect themselves.

7. Why will a petrol-powered scooter stop when its fuel tank becomes empty?

Answer: The scooter will stop because petrol is its source of energy for running.

8. Why is cooking with too much wood or coal harmful to the environment?

Answer: Burning too much wood or coal creates smoke and pollution.

9. Why does a diya containing oil burn longer than a diya without oil?

Answer: The diya containing oil burns longer because the oil acts as fuel.

10. How can you show that electricity can produce movement?

Answer: Switching on an electric fan shows that electricity can produce movement.

11. Why would daily life become difficult without electricity?

Answer: Daily life would become difficult because many appliances and machines in homes, schools and industries depend on electricity.

12. What should you do if you find a fallen electric pole on the road?

Answer: I should stay away from the fallen electric pole and immediately inform an adult.

13. Why is an LED bulb a better choice for saving energy?

Answer: An LED bulb gives the same amount of light while using less electricity.

14. Why should we reduce our dependence on coal for producing electricity?

Answer: We should reduce coal use because burning it produces smoke and harmful gases that pollute the air.

15. How can you demonstrate that wind has energy using a simple toy?

Answer: We can hold a pinwheel in the wind and observe it rotating.

16. What does a spinning water wheel tell us about flowing water?

Answer: A spinning water wheel shows that flowing water can provide energy to make things move.

17. Why were ancient sailing ships able to travel without engines?

Answer: Ancient sailing ships used wind energy acting on their large sails to travel.

18. Why is the Sun important for life on Earth?

Answer: The Sun is important because it is the main source of energy for life on Earth.

19. Which source of energy would you choose for a sunny region—solar energy or coal—and why?

Answer: I would choose solar energy because it uses sunlight and does not pollute the planet with smoke or waste.

20. How can a windy place use its natural surroundings to generate electricity?

Answer: A windy place can use windmills that spin with the wind to generate electricity.

21. How can a fast-flowing river become useful as an energy source?

Answer: The movement of fast-flowing water can be used to generate electricity.

22. Why are the Sun, wind and water considered cleaner energy sources than coal?

Answer: Energy from the Sun, wind and water does not pollute the planet with smoke or waste.

23. How can a torch work when there is no electricity supply?

Answer: A torch can work because its batteries contain stored energy.

24. How can a person still walk even after skipping a meal?

Answer: The person can walk because the body can use energy stored for future use.

25. How can well-placed windows help a house save energy?

Answer: Well-placed windows allow better use of natural sunlight and wind, reducing the need for additional energy.

26. Why is drying clothes in sunlight an example of using natural energy wisely?

Answer: Drying clothes in sunlight uses the Sun's energy directly without requiring electricity.

27. A fan and a bulb both use electricity, so why do they perform different tasks?

Answer: A fan uses electricity for movement while a bulb uses it to produce light.

28. Which vehicle is more energy efficient if two vehicles travel the same distance but one uses less fuel?

Answer: The vehicle that uses less fuel to travel the same distance is more energy efficient.

29. What change could a family make at home to reduce electricity use for lighting?

Answer: The family could use energy-efficient LED bulbs that provide the same light using less electricity.

30. Why should we save energy and choose clean sources whenever possible?

Answer: We should save energy and choose clean sources to reduce pollution and use energy wisely.

7.7 Two-mark questions with Answers of LOTS Type: (22 Questions)

Two-Mark Descriptive Questions with Answers – LOTS Type:

1. What is energy? Mention one way in which we use it.

Answer:

1. Energy is what makes things move, light up, produce sound, do work and change temperature.

2. We use energy to perform activities such as moving objects, producing light or heating things.

2. How does air make an inflated balloon move?

Answer:

1. When an inflated balloon is released, air rushes out of it.
2. The rushing air pushes the balloon forward and makes it move.

3. Explain how a rubber-band guitar produces sound.

Answer:

1. When the stretched rubber bands are plucked, they vibrate.
2. These vibrations produce sound, which is an example of sound energy.

4. How does the Sun provide heat energy? Give an example from the chapter.

Answer:

1. Sunlight provides heat energy and makes objects exposed to it warmer.
2. Water kept in sunlight becomes warmer than water kept in the shade.

5. Why is food considered a source of energy?

Answer:

1. Food provides the energy our body needs to perform different activities.
2. After eating food, we feel active and ready to work or play.

6. Why do animals need energy, and where do they get it from?

Answer:

1. Animals need energy to move, fly, swim, run, find food and protect themselves.
2. Like humans, animals obtain their energy from food.

7. Name two fuels used by vehicles and explain their purpose.

Answer:

1. Petrol and diesel are two fuels commonly used by vehicles.
2. They act as sources of energy that help vehicles run.

8. Name two fuels used for cooking and state one disadvantage of burning them.

Answer:

1. Wood and coal are two fuels that may be used for cooking.
2. Burning them produces smoke and pollution.

9. Explain the role of oil in a diya.

Answer:

1. Oil acts as the fuel in a diya.
2. It enables the wick to continue burning for a longer time.

10. Mention four effects that electricity can produce.

Answer:

1. Electricity can be used to produce **movement and sound**.
2. It can also be used to produce **light and heat**.

11. Mention any two safety precautions to follow while using electricity.

Answer:

1. We should never touch wires or parts of electrical devices when they are plugged in.
2. We should never insert fingers, pens, sticks or other objects into electrical sockets.

12. What is energy efficiency? Give one example.

Answer:

1. Energy efficiency means using less energy to do the same work.
2. LED bulbs are energy efficient because they provide the same amount of light while using less electricity.

13. What happens when coal is burned to generate electricity?

Answer:

1. Burning coal produces a lot of smoke and harmful gases.

2. These pollutants are harmful to our health and the environment.

14. How does a pinwheel demonstrate wind energy?

Answer:

1. When a pinwheel is held in the wind, it begins to rotate.
2. This shows that wind is a source of energy that can make things move.

15. How does the water-wheel activity demonstrate energy from water?

Answer:

1. When water is poured onto the water wheel, the wheel begins to spin.
2. This demonstrates that flowing water is a source of energy capable of producing movement.

16. Name three natural sources of energy and state what they can do.

Answer:

1. The Sun, wind and flowing water are natural sources of energy.
2. Their energy can make things work and can also be used to generate electricity.

17. How was wind energy used by ancient ships?

Answer:

1. Ancient ships had massive sails that caught the wind.
2. Wind energy helped these ships travel across vast seas.

18. How are solar panels and windmills used to generate electricity?

Answer:

1. Solar panels capture sunlight and turn it into electricity.
2. Windmills spin with the wind to generate electricity.

19. What is clean energy? Name three sources of it mentioned in the chapter.

Answer:

1. Clean energy is energy generated from natural sources without polluting the planet with smoke or waste.
2. The **Sun, wind and water** are sources of clean energy mentioned in the chapter.

20. Give two examples of stored energy mentioned in the chapter.

Answer:

1. Our body stores energy that can be used later when needed.
2. Batteries used in torches and toys also contain stored energy.

21. How can the design of a house help save energy?

Answer:

1. Well-placed rooms, doors, windows and courtyards can make good use of natural sunlight, wind and heat.
2. Such designs keep homes bright and airy and help reduce energy use in different seasons.

22. Why should we use and save energy wisely?

Answer:

1. Energy is needed for the activities of living things, vehicles, homes and many other things around us.
2. We should save energy and choose clean sources such as the Sun, wind and water whenever possible.

7.8. Two-mark questions with Answers of HOTS Type: (25 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. A balloon filled with air moves when released. Why does this happen? What does it demonstrate?

Answer:

1. The air rushing out of the balloon pushes it forward and makes it move.
2. This demonstrates that moving air can produce movement and make things work.

2. Two cups of water are kept for 20 minutes, one in sunlight and another in shade. Which will be warmer and why?

Answer:

1. The cup kept in sunlight will be warmer than the cup kept in shade.
2. This is because sunlight provides heat energy to the water.

3. A child plucks a stretched rubber band and then stops its vibration with a finger. What will happen to the sound? Why?

Answer:

1. The sound will stop when the rubber band stops vibrating.
2. This is because the vibrations of the rubber band produce sound energy.

4. Why does a child feel tired when hungry but active after eating?

Answer:

1. A hungry child may feel tired because the body needs energy for its activities.
2. Eating food provides the energy needed to become active and perform work.

5. A bird and a car are both moving. How are their sources of energy different?

Answer:

1. A bird obtains the energy required for movement from food.
2. A fuel-powered car obtains its energy from fuels such as petrol or diesel.

6. Two diyas have cotton wicks, but only one contains oil. Which will burn longer and why?

Answer:

1. The diya containing oil will burn longer.
2. This is because oil acts as the fuel needed to keep the wick burning.

7. Why is excessive use of wood and coal for cooking not a good choice? Suggest a reason based on the chapter.

Answer:

1. Burning wood and coal produces smoke and causes pollution.
2. Therefore, their excessive use can harm the surrounding environment.

8. A fan and a bulb both use electricity but give different outputs. Explain.

Answer:

1. A fan uses electricity mainly to produce movement and blow air.
2. A bulb uses electricity to produce light, showing that electricity can be used for different purposes.

9. You notice a broken electric wire near your playground. What should you do and why?

Answer:

1. I should stay away from the broken wire and immediately inform an adult.
2. I should not touch or try to repair it because electricity can be dangerous if handled carelessly.

10. Two bulbs give the same amount of light, but one uses less electricity. Which should you choose and why?

Answer:

1. I should choose the bulb that uses less electricity to give the same amount of light.
2. It is more energy efficient because energy efficiency means using less energy to do the same work.

11. Why would replacing ordinary bulbs with LED bulbs help conserve energy?

Answer:

1. LED bulbs can provide the same amount of light while consuming less electricity.

2. Therefore, using LED bulbs is an example of improving energy efficiency.

12. Why is electricity generated from the Sun preferable to electricity generated by burning coal?

Answer:

1. Burning coal produces smoke and harmful gases that pollute the air.
2. Solar energy is a clean source that can generate electricity without producing such smoke or waste.

13. A pinwheel is not rotating indoors but starts rotating when taken into the wind.

What can you conclude?

Answer:

1. The pinwheel rotates when moving air acts on it.
2. This shows that wind is a source of energy capable of producing movement.

14. Water is poured onto a simple water wheel and it starts spinning. What does this activity demonstrate?

Answer:

1. Flowing water provides the energy needed to make the wheel spin.
2. Therefore, moving water can be used as a source of energy to make things work.

15. How were ancient sailing ships able to travel long distances without petrol or diesel?

Answer:

1. Ancient ships had large sails that caught the moving wind.
2. They used wind energy to travel across the seas without modern fuels.

16. A village receives strong sunlight for most of the year. Which clean energy source would be suitable there and why?

Answer:

1. Solar energy would be suitable because the village receives plenty of sunlight.
2. Solar panels can capture sunlight and convert it into electricity without producing smoke or waste.

17. A coastal area experiences strong winds regularly. How could people make use of this natural condition?

Answer:

1. People could install windmills that rotate using the strong winds.
2. The rotating windmills can use wind energy to generate electricity.

18. A region has fast-moving rivers. How can the flowing water help meet its energy needs?

Answer:

1. Fast-moving river water contains energy that can make wheels or turbines move.
2. The energy of flowing or falling water can be used to generate electricity.

19. Why are the Sun, wind and water called clean sources of energy?

Answer:

1. Energy from these natural sources can be used to generate electricity.
2. They are called clean energy sources because they do not pollute the planet with smoke or waste.

20. A torch works even during a power cut. How is this possible?

Answer:

1. A torch can work during a power cut because it uses batteries rather than the household electricity supply.
2. Batteries contain stored energy that can be used when required.

21. How can a person walk or run even if they have skipped one meal?

Answer:

1. The human body stores some energy for future use.

2. When a meal is skipped, the body can use this stored energy for activities such as walking or running.

22. Why can a house with well-placed windows and open spaces require less energy?

Answer:

1. Well-placed windows and openings allow the house to make better use of natural sunlight, wind and heat.
2. This can keep the house bright and airy and reduce the need for additional energy.

23. Why is drying clothes in sunlight better than using an electrical appliance when conditions are suitable?

Answer:

1. Sunlight can provide the energy required to dry clothes naturally.
2. Using sunlight allows us to make direct use of a natural energy source without plugging anything in.

24. Two vehicles travel the same distance, but one consumes less fuel. Which vehicle would you consider better in terms of fuel use? Why?

Answer:

1. The vehicle that uses less fuel to travel the same distance makes better use of its fuel.
2. Comparing kilometres travelled per litre helps us identify which vehicle uses fuel more efficiently.

25. If you were designing a 'clean energy home', which sources of energy would you consider and why?

Answer:

1. I would consider natural sources such as solar or wind energy for the home.
2. These sources provide clean energy and help reduce pollution from conventional fuels.

7.9. Three-mark questions with Answers of LOTS Type: (10 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. What is energy? Mention any two things that energy can make happen.

Answer:

1. Energy is what makes things work and causes different activities around us.
2. Energy can make things **move, light up and produce sound**.
3. It can also help things do work and become warmer or cooler.

2. Explain the balloon activity that demonstrates energy from moving air.

Answer:

1. A balloon is filled with air and its mouth is held tightly.
2. When the mouth is released, the air rushes out of the balloon.
3. The escaping air pushes the balloon forward, showing that moving air can generate energy.

3. Describe the rubber-band guitar activity and what it teaches us.

Answer:

1. Rubber bands are stretched around a cardboard box and across a hole.
2. When the rubber bands are plucked, they vibrate and produce sounds.
3. This activity demonstrates **sound energy** produced by vibrations.

4. Explain how the Sun-powered water-warmer activity demonstrates heat energy.

Answer:

1. Two cups are filled with water, with one placed in sunlight and the other in shade.
2. After 15–20 minutes, the water kept in sunlight becomes warmer.
3. This demonstrates that sunlight provides us with **heat energy**.

5. Explain why food is an important source of energy for living things.**Answer:**

1. The food we eat provides the energy our body needs to perform activities.
2. When we do not eat, we may feel tired, while eating makes us feel active.
3. Animals also obtain energy from food to move, fly, swim, find food and protect themselves.

6. Explain the importance of fuels in our daily life with examples.**Answer:**

1. Fuels are sources of energy used for many activities in our daily lives.
2. Petrol and diesel provide energy for running vehicles.
3. Cooking gas, wood and coal are examples of fuels used for cooking.

7. Describe the diya activity used to explain how fuel works.**Answer:**

1. Two diyas are prepared with cotton wicks, but oil is added to only one of them.
2. When both wicks are lit, the diya containing oil burns for a longer time.
3. This shows that **oil acts as a fuel** that helps the diya continue burning.

8. Explain three ways in which electricity is useful in our daily life.**Answer:**

1. Electricity is used to produce **movement**, such as in an electric fan.
2. It is used to produce **light and sound** through different electrical devices.
3. It can also produce **heat** and operate machines in homes, schools and industries.

9. Mention three safety precautions that should be followed while using electricity.**Answer:**

1. Never touch wires or electrical devices when they are plugged in.
2. Never insert fingers, pens, sticks or other objects into electrical sockets.
3. Stay away from broken wires, electric boxes and transformers and inform an adult if something looks unsafe.

10. What is energy efficiency? Explain it with the example of an LED bulb.**Answer:**

1. Energy efficiency means **using less energy to do the same work**.
2. LED bulbs can provide the same amount of light while using less electricity.
3. Therefore, using LED bulbs helps save energy and reduce wastage.

11. What are the disadvantages of producing electricity by burning coal?**Answer:**

1. Much of the electricity we use comes from burning fuels such as coal.
2. Burning coal creates smoke and harmful gases that pollute the air.
3. Polluted air is harmful to both our health and the environment.

12. Describe the pinwheel activity used to demonstrate wind energy.**Answer:**

1. A pinwheel is made using a square piece of paper and attached to a stick.
2. When the pinwheel is held in the wind, it begins to rotate.
3. Its rotation demonstrates that **wind is a source of energy** capable of making things move.

13. Describe the water-wheel activity and what it demonstrates.**Answer:**

1. A simple water wheel is made using a paper cup, spoons and a pencil or straw.
2. When water is poured onto the wheel, the wheel begins to move.
3. This activity demonstrates that **flowing water is a source of energy** that can make things work.

14. Explain how the Sun, wind and water can be used to generate electricity.**Answer:**

1. Solar panels capture sunlight and turn it into electricity.
2. Windmills spin with the wind to generate electricity.
3. Fast-moving rivers or falling water can also be used to generate electricity.

15. What is clean energy? Why is it important?**Answer:**

1. Electricity generated using natural sources such as the **Sun, wind and water** is called clean energy.
2. These sources do not pollute the planet with smoke or waste.
3. Using clean energy helps us meet our energy needs while reducing pollution.

16. Explain how wind energy was used by ancient ships.**Answer:**

1. Ancient ships had massive sails that could catch the wind.
2. Wind energy helped these ships move across vast seas.
3. Traders from places such as Gujarat and Tamil Nadu used wind-powered ships to travel to distant regions.

17. What is stored energy? Give two examples mentioned in the chapter.**Answer:**

1. Stored energy is energy kept for use at a later time.
2. Our body stores energy that allows us to walk or run even if we skip a meal.
3. Batteries used in torches and toys also contain stored energy.

18. How can the design of a house help reduce energy use?**Answer:**

1. Rooms, doors and windows can be placed to make good use of natural sunlight, wind and heat.
2. Courtyards and well-placed openings can keep houses bright and airy.
3. Such designs can reduce the amount of additional energy required in different seasons.

19. Explain the importance of the Sun as a source of energy.**Answer:**

1. The Sun provides us with **light and heat energy**.
2. Its energy can be used directly for activities such as warming water and drying clothes.
3. The Sun is described as the **main source of energy for life on Earth**.

20. Why should we use and save energy wisely?**Answer:**

1. Energy makes our world active and is used by humans, animals, vehicles, homes and industries.
2. Clean energy can be obtained from natural sources such as the Sun, wind and water.
3. We should save energy and choose clean sources whenever possible to reduce harm to the Earth.

7.10. Three-mark questions with Answers of HOTS Type: (20 Questions)**Three-Mark Descriptive Questions with Answers – HOTS Type:**

1. Rohan releases two balloons, one filled with more air than the other. How can he use this activity to understand energy from moving air?

Answer:

1. When the balloons are released, the escaping air pushes them forward.

2. Rohan can observe how the movement of each balloon is related to the air rushing out of it.
3. The activity helps him conclude that **moving air can generate energy and cause movement**.

2. Two identical cups of water are placed in sunlight and shade for 20 minutes. Predict the result and explain the reason.

Answer:

1. The water kept in sunlight will become warmer than the water kept in shade.
2. The Sun transfers heat energy to the water exposed to sunlight.
3. This demonstrates that **sunlight is a source of heat energy**.

3. A child plucks a stretched rubber band and then touches it to stop its vibration. What will happen, and what can the child conclude?

Answer:

1. The rubber band produces sound when it is plucked and begins to vibrate.
2. The sound stops when its vibration is stopped.
3. The child can conclude that **vibrations of the rubber band produce sound energy**.

4. A child feels tired before breakfast but energetic after eating. Explain this observation using the concept of energy.

Answer:

1. When the child is hungry, the child may feel tired and less active.
2. Food provides the energy needed by the body for movement and other activities.
3. Therefore, eating breakfast helps the child become active and ready to work or play.

5. Compare the energy sources of a running child, a flying bird and a moving petrol car.

Answer:

1. A running child obtains energy from the **food** they eat.
2. A flying bird also obtains the energy required for movement from **food**.
3. A petrol car uses **fuel** as its source of energy, showing that different things can depend on different energy sources.

6. A family uses wood for cooking every day. What problem can this cause, and what should they consider while choosing an energy source?

Answer:

1. Burning wood regularly can produce smoke and cause pollution.
2. Smoke from such fuels can negatively affect the surroundings.
3. Therefore, the family should consider cleaner energy choices whenever possible.

7. Two diyas have identical wicks, but only one contains oil. Predict what will happen when both are lit and explain why.

Answer:

1. The diya containing oil will burn longer than the diya without oil.
2. Oil acts as the **fuel** needed to keep the wick burning.
3. This demonstrates that a suitable fuel is required to provide energy for an activity to continue.

8. Imagine there is no electricity in your house for an entire day. Mention three ways your daily routine could be affected.

Answer:

1. Electrical appliances such as fans and lights would not work normally.
2. Devices that depend on electricity for movement, light, sound, heat or cooling could not perform their usual functions.
3. This situation would show how strongly our daily lives depend on electricity.

9. Your classroom uses older bulbs even though LED bulbs are available. Why would changing to LED bulbs be a better choice?

Answer:

1. LED bulbs can provide the same amount of light while using less electricity.
2. Using less energy to perform the same work is called **energy efficiency**.
3. Therefore, replacing the older bulbs with LEDs would help save electricity.

10. A child sees a broken electric wire near the road. What should the child do, and why?

Answer:

1. The child should stay away from the broken electrical wire.
2. The child should immediately inform an adult instead of touching or trying to repair it.
3. These precautions are necessary because electricity can be dangerous when handled carelessly.

11. A town can generate electricity either by burning coal or by using solar energy. Which option would be cleaner and why?

Answer:

1. Solar energy would be the cleaner option for generating electricity.
2. Burning coal produces smoke and harmful gases that pollute the air.
3. Energy from sunlight does not pollute the planet with smoke or waste and is therefore considered **clean energy**.

12. A pinwheel rotates strongly on a windy day but hardly moves when there is no wind. What does this observation tell you?

Answer:

1. Moving air makes the pinwheel rotate.
2. When there is little or no wind, there is less movement of the pinwheel.
3. This observation demonstrates that **wind is a source of energy that can make things move**.

13. A village is located beside a fast-flowing river. How could the river become useful as an energy source?

Answer:

1. Flowing water has energy that can make objects such as water wheels move.
2. Fast-moving or falling water can also be used to generate electricity.
3. Therefore, the village could make use of the river as a **natural source of clean energy**.

14. A sunny village and a windy coastal village want to use clean energy. Suggest a suitable energy source for each and justify your answer.

Answer:

1. The sunny village can use **solar energy** because solar panels capture sunlight and turn it into electricity.
2. The coastal village can use **wind energy** because windmills spin with the wind to generate electricity.
3. Both choices use natural sources and can provide electricity without pollution from smoke or waste.

15. How could ancient ships travel long distances without modern engines or fuels such as petrol and diesel?

Answer:

1. Ancient ships were fitted with massive sails that caught moving air.
2. The wind pushed against the sails and provided the energy needed for movement.
3. Thus, ancient sailors made effective use of **wind energy** to travel across seas.

16. A torch continues to work during a power cut. What does this tell you about energy storage?

Answer:

1. A torch can operate during a power cut because it can use batteries.
2. Batteries contain **stored energy** that is available when required.
3. This shows that energy can be stored and used later rather than being used immediately.

17. A person skips one meal but can still walk and perform normal activities. How is this possible?

Answer:

1. The human body can store energy for future use.
2. When a meal is skipped, the body can use some of its stored energy.
3. Therefore, the person may still be able to walk or perform activities even without eating that particular meal.

18. How can the proper placement of windows and courtyards help a house save energy?

Answer:

1. Well-placed windows and openings allow natural sunlight and wind to enter the house.
2. Courtyards and suitable openings can help keep rooms bright and airy.
3. As a result, the house can reduce its dependence on additional energy in different seasons.

19. A family uses an electric appliance to dry clothes even on a bright sunny day. Suggest a better choice and explain its benefits.

Answer:

1. The family can hang the clothes outside and use sunlight to dry them.
2. This makes direct use of the Sun's natural energy without plugging anything in.
3. It can therefore reduce unnecessary use of electricity while making use of an available natural energy source.

20. Two vehicles travel the same distance, but Vehicle A uses less petrol than Vehicle B. What can you infer, and how could the vehicles be compared?

Answer:

1. Vehicle A makes better use of fuel because it travels the same distance using less petrol.
2. The vehicles can be compared by finding how many kilometres each travels per litre of fuel.
3. The vehicle travelling more kilometres per litre uses fuel more efficiently.

7.11 Five-mark questions with Answers of LOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type:

1. What is energy? Explain its importance in our everyday life.

Answer:

1. **Energy** is what makes things move, light up, produce sound, do work and change temperature.
2. We use energy every day for different activities at home, school and other places.
3. Humans and animals need energy from **food** to perform various activities.
4. Vehicles use fuels such as **petrol and diesel** as sources of energy.
5. Electrical devices use **electricity** to produce movement, sound, light and heat.

2. Explain how food and fuels act as sources of energy.

Answer:

1. The **food we eat provides energy** needed by our body for different activities.
2. When we are hungry, we may feel tired, while eating food makes us feel active.
3. Animals also obtain energy from food to move, fly, swim, run, find food and protect themselves.
4. Vehicles obtain energy from fuels such as **petrol and diesel**.
5. Fuels such as cooking gas, wood and coal are also used for activities such as cooking.

3. Explain the different uses of electricity and the precautions we should follow while using it.**Answer:**

1. Electricity can be used to produce **movement, sound, light and heat**.
2. Homes, schools and industries use electricity to operate various appliances and machines.
3. We should never touch wires or electrical devices while they are plugged in.
4. We should never insert fingers, pens, sticks or other objects into electrical sockets.
5. We should stay away from broken wires, electric poles, electric boxes and transformers and inform an adult if something is unsafe.

4. Explain how the Sun, wind and water are sources of energy.**Answer:**

1. The **Sun, wind and flowing water** are natural sources of energy.
2. The Sun provides heat energy, as seen when water kept in sunlight becomes warmer.
3. Wind can make a pinwheel rotate and was also used to move ancient sailing ships.
4. Flowing water can make a water wheel spin and can be used to generate electricity.
5. These activities show that the Sun, wind and water can provide energy to make things work.

5. What is clean energy? Explain how clean energy can be generated from natural sources.**Answer:**

1. Energy generated from natural sources such as the **Sun, wind and water** without polluting the planet with smoke or waste is called **clean energy**.
2. **Solar panels** capture sunlight and turn it into electricity.
3. **Windmills** spin with the wind to generate electricity.
4. Fast-moving rivers or falling water can also be used to generate electricity.
5. Using these clean sources helps us obtain energy without the pollution caused by burning fuels such as coal.

6. Describe five activities or examples from the chapter that demonstrate different forms or sources of energy.**Answer:**

1. Releasing an inflated **balloon** demonstrates how moving air can cause movement.
2. Plucking stretched **rubber bands** demonstrates sound energy produced by vibrations.
3. Keeping water in **sunlight** demonstrates heat energy from the Sun.
4. A **pinwheel** rotating in the wind demonstrates energy from moving air.
5. A **water wheel** spinning under flowing water demonstrates energy from moving water.

7. What is energy efficiency? Explain why it is important to use energy wisely.**Answer:**

1. **Energy efficiency means using less energy to do the same work.**
2. An LED bulb can provide the same amount of light while using less electricity than less efficient bulbs.
3. Using energy efficiently helps save resources and reduce waste.

4. Clean energy from the Sun, wind and water does not pollute the Earth with smoke or waste.
5. Therefore, we should save energy and choose clean sources of energy whenever possible.

8. Explain the harmful effects of burning coal and why cleaner energy sources are useful.

Answer:

1. Much of the electricity we use comes from burning fuels such as **coal**.
2. Burning coal creates a lot of **smoke and harmful gases**.
3. These harmful substances pollute the air and are not good for our health or the environment.
4. The Sun, wind and water can be used to produce electricity without such pollution.
5. Hence, choosing clean sources of energy helps reduce pollution and protect the Earth.

9. Explain stored energy with examples given in the chapter.

Answer:

1. Energy can be **stored and used later** when it is required.
2. Our body stores energy for future use.
3. This stored energy allows us to walk or run even if we skip a meal.
4. Batteries used in devices such as torches and toys also contain stored energy.
5. Thus, both our body and batteries provide examples of energy being stored for later use.

10. Explain how the design of a house can make better use of natural energy.

Answer:

1. Buildings can be designed to make better use of natural energy such as **sunlight, wind and heat**.
2. The proper placement of rooms, doors and windows can help use these natural energy sources effectively.
3. Open spaces such as **courtyards** allow natural light and air into a house.
4. Well-placed openings can help keep homes bright and airy.
5. Such designs can reduce the use of additional energy during different seasons.

7.12 Five-mark questions with Answers of HOTS Type: (5 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. Your school wants to reduce its electricity consumption. Suggest five suitable measures based on the ideas in the chapter.

Answer:

1. The school can replace less efficient bulbs with **LED bulbs**, which provide the same amount of light using less electricity.
2. Classrooms can make better use of **natural sunlight** through properly placed windows and openings.
3. Natural airflow can be used wherever possible to reduce unnecessary use of electrical appliances.
4. Students and teachers should avoid wasting electricity and use energy only when it is required.
5. The school can consider **clean energy sources such as solar energy** to reduce dependence on polluting energy sources.

2. A village has plenty of sunlight throughout the year but obtains electricity by burning coal. What change would you suggest? Explain your reasoning.

Answer:

1. I would suggest that the village make greater use of **solar energy**.
2. Solar panels can capture the abundant sunlight and convert it into electricity.

3. Burning coal produces smoke and harmful gases that pollute the air.
4. Electricity produced from sunlight is **clean energy** because it does not pollute the planet with smoke or waste.
5. Therefore, using the available sunlight would provide the village with a cleaner source of energy.

3. Imagine that there is no electricity in your home for an entire day. Analyse how your daily activities would be affected.

Answer:

1. Electric lights would not work, so we would need to make greater use of natural daylight.
2. Fans and other devices that use electricity for movement or cooling would not operate normally.
3. Electrical appliances producing light, sound, heat or movement could not perform their usual functions.
4. Many activities that normally become easier through electricity would have to be done differently.
5. The experience would help us understand how important electricity has become in our everyday lives.

4. A family uses wood and coal regularly for cooking. Analyse the problem and suggest a better approach.

Answer:

1. Burning wood and coal creates **smoke and pollution**.
2. Frequent use of such fuels can therefore increase pollution around the home and surroundings.
3. The chapter encourages us to use energy wisely and choose cleaner sources whenever possible.
4. The family should reduce unnecessary dependence on fuels that create smoke where cleaner options are available.
5. Choosing cleaner energy sources would help reduce pollution and protect the environment.

5. A sunny region, a windy coastal region and a hilly region with fast-flowing water need electricity. Suggest an appropriate natural energy source for each region.

Answer:

1. The sunny region can use **solar energy** because solar panels capture sunlight and turn it into electricity.
2. The windy coastal region can use **wind energy** because windmills spin with the wind to generate electricity.
3. The hilly region can use **flowing or falling water** to generate electricity.
4. Each region can therefore make use of a natural energy source that is readily available there.
5. These sources provide **clean energy** without polluting the planet with smoke or waste.

6. Design an energy-efficient house using the ideas presented in the chapter. Explain five features you would include.

Answer:

1. I would place windows so that the house receives plenty of **natural sunlight**.
2. I would provide suitable openings so that **natural wind** can keep the rooms airy.
3. I would include open spaces such as a **courtyard** to improve natural light and ventilation.
4. I would use **energy-efficient LED bulbs** when artificial lighting is necessary.

5. I would consider clean sources such as **solar energy** to reduce dependence on conventional electricity.

7. A student says, “Wind cannot do work because we cannot see it.” How would you prove that the statement is incorrect?

Answer:

1. I would make a **pinwheel** and hold it in moving air.
2. The pinwheel would begin to rotate when the wind acts on it.
3. This movement shows that wind can provide energy to make an object move.
4. Ancient sailing ships also used wind acting on their large sails to travel across seas.
5. Windmills further demonstrate that wind energy can be used to generate electricity.

8. Two vehicles travel the same distance, but Vehicle A uses less petrol than Vehicle B. How would you compare them from the viewpoint of energy use?

Answer:

1. Both vehicles should first be compared over the **same distance travelled**.
2. We should find how much petrol each vehicle consumes for that distance.
3. We can compare the number of **kilometres travelled per litre of petrol** by each vehicle.
4. The vehicle travelling farther per litre makes better use of the available fuel.
5. Therefore, Vehicle A would be preferable if it travels the same distance using less petrol.

9. A family dries clothes using an electrical appliance even on sunny days. Evaluate this practice and suggest a better alternative.

Answer:

1. The family is using electricity even when a natural source of energy is readily available.
2. **Sunlight can be used directly to dry clothes** without plugging anything in.
3. Hanging clothes in sunlight would therefore make useful use of the Sun's energy.
4. It would also reduce unnecessary electricity consumption when weather conditions are suitable.
5. Thus, using sunlight for drying clothes is a simple way of using natural energy wisely.

10. A child says, “Energy is needed only when we are running or playing.” Explain why this idea is incorrect.

Answer:

1. Our body needs energy not only for running and playing but also for many other activities.
2. The chapter explains that our **brain uses energy even when we are sitting, sleeping or thinking**.
3. Our body can also store energy and use it later when required.
4. Animals similarly require energy for movement, finding food and protecting themselves.
5. Therefore, energy is continuously important for living things and is not needed only during vigorous physical activity.

7.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Your school wants to become a “Clean Energy School.” Suggest five practical actions based on the chapter.

Answer:

1. The school can use **solar panels** to capture sunlight and generate electricity.
2. Classrooms can use **LED bulbs**, which provide the same amount of light while consuming less electricity.

3. Windows and open spaces can be used effectively to obtain more **natural sunlight and ventilation**.
4. Students can be encouraged to avoid unnecessary energy use and practise energy efficiency.
5. The school should promote the use of **clean energy sources** such as the Sun and wind whenever possible.

2. Your family is planning to build a new house. How would you apply the ideas from the chapter to make the house energy efficient?

Answer:

1. I would place the windows so that the rooms receive sufficient **natural sunlight**.
2. I would provide suitable doors and openings to allow **natural airflow** through the house.
3. I would include open spaces such as **courtyards** to keep the house bright and airy.
4. I would use energy-efficient **LED bulbs** wherever artificial lighting is required.
5. These measures would make better use of natural energy and reduce unnecessary energy consumption.

3. Your village has strong sunlight for most of the year and currently depends heavily on electricity generated by burning coal. Suggest an energy plan for the village.

Answer:

1. The village should make greater use of **solar energy** because sunlight is readily available.
2. **Solar panels** can capture sunlight and convert it into electricity.
3. Burning coal should be reduced because it produces smoke and harmful gases that pollute the air.
4. Solar energy is a **clean source of energy** because it does not pollute the planet with smoke or waste.
5. Thus, greater use of solar energy would help the village meet its energy needs more cleanly.

4. During a power cut, you have no electricity at home for a day. How can you apply your knowledge of energy to manage some daily activities?

Answer:

1. I can make maximum use of **sunlight during the daytime** instead of electric lights.
2. I can use natural airflow through doors and windows instead of depending on electric fans when conditions permit.
3. I can dry clothes in the **Sun** instead of using an electrical appliance.
4. A battery-operated torch can provide light because **batteries contain stored energy**.
5. These practices demonstrate how natural and stored energy can be used when household electricity is unavailable.

5. You are asked to conduct a simple classroom experiment to show that wind has energy. Explain how you would do it.

Answer:

1. I would make a **pinwheel** using a square piece of paper and attach it to a stick.
2. I would take the pinwheel outdoors and hold it in moving air.
3. I would observe that the pinwheel begins to **rotate when the wind blows**.
4. I would compare its movement when the wind is strong and when there is little wind.
5. From the activity, I would conclude that **wind is a source of energy that can make things move**.

6. Your teacher asks you to demonstrate that flowing water can do work. How would you apply the activity given in the chapter?

Answer:

1. I would make a simple **water wheel** using a paper cup, spoons and a pencil or straw.
2. I would arrange the spoons around the cup so that the cup can rotate like a wheel.
3. I would balance the wheel over a container as demonstrated in the chapter.
4. When water is poured onto the wheel, I would observe that the wheel **starts spinning**.
5. This would demonstrate that **flowing water has energy and can make things move**.

7. Your family wants to reduce its electricity use. Suggest five actions based on the ideas presented in the chapter.

Answer:

1. We can replace less efficient bulbs with **LED bulbs** that use less electricity for the same amount of light.
2. We can use **natural sunlight** for lighting rooms whenever possible.
3. We can use natural ventilation through properly placed windows and openings.
4. We can dry clothes in sunlight rather than unnecessarily using electricity.
5. We can regularly observe our energy use through an **energy diary** and identify where energy can be saved.

8. Your family plans to buy one of two vehicles. How would you compare their fuel use before making a choice?

Answer:

1. I would find out how many **kilometres each vehicle travels per litre** of petrol or diesel.
2. I would compare both vehicles using the same measure of distance travelled per litre.
3. A vehicle travelling more kilometres using one litre of fuel makes better use of the available fuel.
4. I would therefore prefer the vehicle that can travel farther while consuming less fuel for the same distance.
5. This comparison applies the chapter's suggestion of comparing vehicles according to the kilometres they travel per litre of fuel.

9. You notice a broken electrical wire near your school gate. What should you do? Explain five safety actions.

Answer:

1. I should **stay away from the broken wire** and avoid touching it.
2. I should warn other children not to go near the unsafe area.
3. I should immediately **inform a responsible adult** about the broken wire.
4. I should never try to move, touch or repair the electrical wire myself.
5. I should follow the same caution around fallen electric poles, electric boxes and transformers because electricity can be dangerous.

10. Your teacher asks you to prepare a one-day "Energy Diary." What would you observe and record?

Answer:

1. I would observe the different activities at home and school that require **energy**.
2. I would record when electricity is used for lights, fans and other devices.
3. I would note occasions when **fuel** is used, such as for cooking or transportation.
4. I would also identify activities where natural energy such as **sunlight or wind** is being used.
5. At the end of the day, I would examine my diary and identify opportunities to **use and save energy wisely**.

7.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. Which statement best describes energy?

- A. Energy is found only in electrical appliances.
- B. Energy makes things move, produce light or sound, do work, and change temperature.
- C. Energy is produced only by the Sun.
- D. Energy is required only by living things.

Answer: B. Energy makes things move, produce light or sound, do work, and change temperature.

2. An inflated balloon moves forward when released mainly because:

- A. the balloon becomes heavier.
- B. gravity pushes it forward.
- C. air rushing out pushes the balloon forward.
- D. sunlight heats the balloon.

Answer: C. Air rushing out pushes the balloon forward.

3. Riya plucks a stretched rubber band. Which sequence correctly explains what happens?

- A. Plucking → Heating → Light
- B. Plucking → Vibration → Sound
- C. Plucking → Cooling → Movement
- D. Plucking → Electricity → Sound

Answer: B. Plucking → Vibration → Sound.

4. Two identical cups contain equal amounts of water. Cup P is kept in sunlight and Cup Q in shade. After 20 minutes, which observation is most likely?

- A. P is warmer than Q.
- B. Q is warmer than P.
- C. Both become equally cold.
- D. Water in P disappears completely.

Answer: A. P is warmer than Q.

5. Which pair correctly matches a living thing with its main energy source discussed in the chapter?

- A. Human — Electricity
- B. Bird — Petrol
- C. Dog — Food
- D. Fish — Coal

Answer: C. Dog — Food.

6. A child feels tired before eating but active after eating. The best explanation is that:

- A. food produces electricity.
- B. food provides energy to the body.
- C. food makes the body lighter.
- D. food stops the body from using energy.

Answer: B. Food provides energy to the body.

7. Which option correctly matches the object with its source of energy?

- A. Petrol car — Food
- B. Human body — Diesel
- C. Electric fan — Electricity
- D. Bird — Petrol

Answer: C. Electric fan — Electricity.

8. Two diyas have identical cotton wicks. Diya X has oil while Diya Y has no oil. What is most likely to happen?

- A. Y burns longer because it has no oil.
- B. X burns longer because oil acts as fuel.

- C. Both burn for exactly the same time.
- D. Neither can produce light.

Answer: B. X burns longer because oil acts as fuel.

9. Which of the following is NOT an effect that electricity is described as producing in the chapter?

- A. Movement
- B. Sound
- C. Light
- D. Food

Answer: D. Food.

10. Which action is safest when you notice a fallen electric pole?

- A. Touch it carefully.
- B. Move it away from the road.
- C. Stay away and inform an adult.
- D. Test whether electricity is flowing through it.

Answer: C. Stay away and inform an adult.

11. An LED bulb and another bulb provide the same amount of light, but the LED uses less electricity. This demonstrates:

- A. sound energy.
- B. stored energy.
- C. energy efficiency.
- D. fuel production.

Answer: C. Energy efficiency.

12. Which statement about coal is correct according to the chapter?

- A. Burning coal cleans the air.
- B. Burning coal produces smoke and harmful gases.
- C. Coal is a form of clean energy.
- D. Coal produces electricity without pollution.

Answer: B. Burning coal produces smoke and harmful gases.

13. A pinwheel rotates when held outdoors on a windy day. Which conclusion is best supported?

- A. Wind can provide energy for movement.
- B. Wind contains stored food.
- C. Wind produces only heat.
- D. The pinwheel produces wind.

Answer: A. Wind can provide energy for movement.

14. Which experiment best demonstrates energy from flowing water?

- A. Plucking a rubber band
- B. Keeping water in sunlight
- C. Pouring water onto a water wheel
- D. Lighting an oil diya

Answer: C. Pouring water onto a water wheel.

15. Consider the following:

- I. Sun
- II. Wind
- III. Flowing water
- IV. Coal

Which combination consists entirely of natural sources highlighted in the chapter as sources of clean energy?

- A. I and IV only

- B. I, II and III
- C. II, III and IV
- D. I, II, III and IV

Answer: B. I, II and III.

16. Which energy conversion is correctly described in the chapter?

- A. Solar panel: sunlight → electricity
- B. Windmill: electricity → wind
- C. Water wheel: sound → water
- D. Coal: electricity → coal

Answer: A. Solar panel: sunlight → electricity.

17. A village has strong winds throughout the year. Which method would best use the locally available natural energy?

- A. Installing windmills
- B. Burning more coal
- C. Using more petrol
- D. Burning more wood

Answer: A. Installing windmills.

18. Which region-source pair is most appropriate?

- A. Sunny region — Solar panels
- B. Windy region — Coal only
- C. Fast-flowing river — Petrol
- D. Sunny region — Diesel generator only

Answer: A. Sunny region — Solar panels.

19. Ancient sailing ships could travel across seas mainly by using:

- A. solar panels.
- B. batteries.
- C. wind acting on their sails.
- D. petrol engines.

Answer: C. Wind acting on their sails.

20. Which of the following is the main source of energy for life on Earth according to the chapter?

- A. Coal
- B. Sun
- C. Petrol
- D. Battery

Answer: B. Sun.

21. A torch works during a power cut because its batteries contain:

- A. wind energy.
- B. stored energy.
- C. coal energy.
- D. food energy.

Answer: B. Stored energy.

22. A person who skips one meal may still be able to walk because:

- A. walking requires no energy.
- B. sunlight directly powers the muscles.
- C. the body can use stored energy.
- D. air provides all the required energy.

Answer: C. The body can use stored energy.

23. Which house design would most likely reduce the need for additional energy?

- A. A house with all openings permanently closed

- B. A house designed to make good use of sunlight and wind
- C. A house requiring lights throughout the day
- D. A house without windows or courtyards

Answer: B. A house designed to make good use of sunlight and wind.

24. Which sequence correctly represents an energy chain given in the chapter?

- A. Sun → Heat → Drying clothes
- B. Wind → Food → Lighting a bulb
- C. Coal → Wind → Running
- D. Water → Sound → Eating food

Answer: A. Sun → Heat → Drying clothes.

25. Which is another correct energy chain from the chapter?

- A. Wind → Movement → Turns a turbine to make electricity
- B. Food → Light → Turns a windmill
- C. Sun → Sound → Runs a petrol car
- D. Electricity → Food → Helps plants grow

Answer: A. Wind → Movement → Turns a turbine to make electricity.

26. Which activity makes the most direct use of natural solar energy without plugging in an electrical device?

- A. Running an electric fan
- B. Drying clothes in sunlight
- C. Using an electric heater
- D. Switching on a bulb

Answer: B. Drying clothes in sunlight.

27. Study the statements:

Statement I: Clean energy can come from the Sun, wind and water.

Statement II: Clean energy pollutes the planet with large amounts of smoke and waste.

Which option is correct?

- A. Both I and II are true.
- B. Both I and II are false.
- C. I is true, but II is false.
- D. I is false, but II is true.

Answer: C. I is true, but II is false.

28. Vehicle P travels farther per litre of petrol than Vehicle Q. Based on the comparison suggested in the chapter, which statement is most reasonable?

- A. Vehicle P makes better use of each litre of fuel.
- B. Vehicle Q must be faster.
- C. Both vehicles must consume equal fuel.
- D. Distance travelled cannot be compared with fuel used.

Answer: A. Vehicle P makes better use of each litre of fuel.

29. Which combination shows the wisest use of energy?

- A. Keeping lights on in an empty room and burning more coal
- B. Using LED bulbs and making use of natural sunlight
- C. Using electricity unnecessarily on a sunny day
- D. Choosing sources that produce more smoke

Answer: B. Using LED bulbs and making use of natural sunlight.

30. Which statement best summarizes the central message of the chapter?

- A. Only electricity is useful as energy.
- B. Energy is needed only for machines.
- C. Energy comes from different sources, and we should use it wisely and prefer clean sources whenever possible.

D. Natural sources cannot make things work.

Answer: C. Energy comes from different sources, and we should use it wisely and prefer clean sources whenever possible.

7.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities While Teaching:

The following practices can make the chapter more **activity-oriented, experiential, safe, environmentally responsible, and connected to students’ everyday lives.**

1. **Learning by Doing through Simple Experiments**
Conduct the chapter activities such as the **balloon air rocket, rubber-band guitar, sun-powered water warmer, pinwheel, and water wheel.** Ask students to first predict what will happen, perform the activity, observe the result, and then explain the energy involved. This develops observation and scientific reasoning instead of relying only on textbook explanation.
2. **Use an “Energy Around Us” Observation Activity**
Ask students to identify examples of energy in their classroom, home and playground. They can classify examples according to sources such as **food, fuel, electricity, Sun, wind and water,** and identify effects such as movement, heat, light and sound. This connects the concept of energy with familiar experiences.
3. **Promote Energy Conservation as a Daily Habit**
Encourage students to maintain a simple **Energy Diary** recording where energy is being used and where it could be saved. Discuss practical actions such as using energy efficiently and choosing clean energy sources. Students can report one energy-saving action they practised at home each week.
4. **Demonstrate Energy Efficiency through Comparison**
Use the textbook example of **LED bulbs** to explain that energy efficiency means using less energy to perform the same work. Let students identify other situations in school where unnecessary energy use can be avoided. This develops responsible energy-use habits from an early age.
5. **Integrate Electrical Safety with Energy Education**
Make electrical safety an essential part of the lesson rather than treating it as a separate topic. Use picture cards or situations involving sockets, plugged-in wires, broken wires, fallen poles, electrical boxes and transformers, and ask students to identify safe and unsafe behaviour. Reinforce that children should **stay away from electrical hazards and inform an adult** rather than attempting repairs.
6. **Clean Energy versus Polluting Energy Discussion**
Compare electricity produced by burning fuels such as **coal** with energy obtained from **Sun, wind and water.** Students can prepare a simple two-column chart showing sources that cause pollution and cleaner alternatives discussed in the chapter. This develops environmental awareness and responsible decision-making.
7. **Connect Energy with Local and Traditional Practices**
Ask students to observe examples such as **drying clothes or papads in sunlight** and buildings designed to make use of natural sunlight and wind. Discuss how courtyards and properly positioned openings can keep homes bright and airy while reducing additional energy use. This connects science with everyday and traditional practices.
8. **Use Prediction–Observation–Explanation (POE)**
Before each activity, ask students to **predict** what will happen; after performing it, ask them to **observe** carefully; finally, have them **explain** the result. For example, they can predict whether a pinwheel will move without wind or which cup of water will

become warmer in sunlight versus shade. This encourages reasoning rather than memorisation.

9. **Use an Energy Flow Game for Concept Reinforcement**

Organise students into groups and provide cards for **energy sources, energy types and uses**. Students can form correct chains such as **Sun → Heat → Drying clothes** and **Wind → Movement → Turning a turbine to make electricity**. This provides an enjoyable way to assess whether students understand how energy moves from a source to a useful outcome.

10. **End the Chapter with an Energy-Saving Pledge**

Ask every student to choose one realistic action for using energy wisely at home or school. Students can share their actions and explain whether they involve **saving energy, improving efficiency, or choosing a clean source**. This converts the chapter's message of using and saving energy wisely into responsible everyday behaviour.

7.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

Here are innovative, child-friendly ideas that can make the chapter more **interactive, creative, experiential and inquiry-based**.

(1) **Mini Energy Lab – Learning Stations:**

Create different activity stations in the classroom: **balloon air rocket, rubber-band guitar, solar water warmer, pinwheel and water wheel**. Small groups rotate through the stations, observe what happens and identify the source or effect of energy. This transforms the classroom into a simple hands-on energy laboratory.

(2) **Build an “Energy Detective” Challenge:**

Give students the role of **Energy Detectives** and ask them to find examples of energy around the school. They can record the object/activity, its energy source and what the energy makes happen—for example, **electricity → fan → movement**. The findings can be displayed as a classroom “Energy Map.”

(3) **Design-a-Clean-Energy Village:**

Groups can create a model or chart of an imaginary village powered by **solar panels, windmills and flowing water**. Each group explains where it would place the different energy systems and how they would provide electricity. This combines science learning with creativity and environmental awareness.

(4) **Energy Flow Card Game:**

Prepare three sets of cards: **Sources** (Sun, wind, water, food, fuel, electricity), **Types** (heat, light, movement, sound), and **Uses**. Students compete to form meaningful energy chains such as **Sun → Heat → Drying clothes** and **Wind → Movement → Turning a turbine**. This converts the chapter's Energy Flow Game into a collaborative learning challenge.

(5) **One-Day Digital or Pictorial Energy Diary:**

Students can create a pictorial diary showing where they used or observed energy from morning to night. They can use drawings, photographs or symbols for **food, fuel, electricity, sunlight, wind and water** and mark places where energy could be saved. The activity directly extends the chapter's Energy Diary idea.

(6) **Young Energy Engineer Challenge:**

Give groups a problem such as: “How can we dry clothes without electricity?”, “How can we make something move using wind?” or “How can we warm water naturally?”

Students design a solution using ideas from the chapter and demonstrate it using simple materials. This promotes **problem-solving, application and design thinking**.

(7) Design an Energy-Smart House:

Ask students to draw or construct a model house showing suitable **windows, doors, openings and courtyards**. They should explain how their design uses natural sunlight and wind to keep the house bright and airy. This creatively applies the chapter's discussion of traditional building design and reduced energy use.

(8) Energy Safety Role-Play:

Give groups situations such as seeing a **broken electrical wire, an open socket or an electric box**. Students role-play the correct response and explain why they should stay away and inform an adult. This makes electrical-safety learning memorable without exposing children to actual electrical hazards.

(9) “Coal or Clean?” Decision-Making Game:

Present students with energy-source cards such as **coal, Sun, wind and water**. Teams classify them and explain which choices can generate energy without the smoke and harmful gases associated with burning coal. This introduces environmental decision-making at an age-appropriate level.

(10) Energy Innovation Exhibition:

Conclude the chapter with a small class exhibition titled **“Energy—How Things Work.”** Students can display pinwheels, water-wheel models, energy-flow charts, energy-smart house designs and clean-energy village models. Each student explains the **energy source, what it makes happen, and how energy can be used wisely**, turning assessment into a student-led learning experience.

7.17: Practicing Questions/Question Bank :

A. Fill in the Blanks:

- _____ makes things move, light up, produce sound and do work.
Answer: Energy
- The movement of air can generate _____.
Answer: Energy
- A stretched rubber band produces _____ when it vibrates.
Answer: Sound
- The Sun provides _____ energy that can warm water.
Answer: Heat
- _____ gives our body energy to work and play.
Answer: Food
- Petrol and diesel are sources of energy for _____.
Answer: Vehicles
- Oil acts as a _____ in a diya.
Answer: Fuel
- Electricity can produce movement, sound, light and _____.
Answer: Heat
- Using less energy to do the same work is called energy _____.
Answer: Efficiency

10. _____ bulbs use less electricity to provide the same amount of light.

Answer: LED

11. Burning coal produces smoke and harmful _____.

Answer: Gases

12. A _____ rotates when moving air acts on it.

Answer: Pinwheel

13. Solar panels convert sunlight into _____.

Answer: Electricity

14. _____ spin with the wind to generate electricity.

Answer: Windmills

15. Batteries contain _____ energy that can be used later.

Answer: Stored

These concepts are directly developed through the chapter's activities and discussion of food, fuel, electricity and natural energy sources.

B. One-Mark Descriptive Questions:

1. **What is energy?**

Answer: Energy makes things move, light up, produce sound, do work and change temperature.

2. **What happens when air rushes out of an inflated balloon?**

Answer: The escaping air pushes the balloon forward.

3. **Why does a plucked rubber band produce sound?**

Answer: A plucked rubber band vibrates and produces sound.

4. **What is the main source of energy for our body?**

Answer: Food is a source of energy for our body.

5. **Name two fuels used by vehicles.**

Answer: Petrol and diesel.

6. **What is energy efficiency?**

Answer: Energy efficiency means using less energy to do the same work.

7. **Name three natural sources of clean energy.**

Answer: The Sun, wind and water.

8. **What does a solar panel do?**

Answer: A solar panel captures sunlight and turns it into electricity.

9. **What should you do if you see a broken electrical wire?**

Answer: Stay away from it and inform an adult.

10. **Give one example of stored energy mentioned in the chapter.**

Answer: A battery contains stored energy.

C. Two-Mark Descriptive Questions:

1. How does food help living things?**Answer:**

1. Food provides energy to humans for different activities.
2. Animals also obtain energy from food to move, find food and protect themselves.

2. How does the balloon activity demonstrate energy?**Answer:**

1. When the inflated balloon is released, air rushes out.
2. The escaping air pushes the balloon forward, showing that moving air can cause movement.

3. Why are LED bulbs considered energy efficient?**Answer:**

1. LED bulbs can provide the same amount of light while using less electricity.
2. Using less energy to do the same work is called energy efficiency.

4. Why can burning wood and coal be harmful?**Answer:**

1. Burning wood and coal produces smoke.
2. This causes pollution and can harm the environment.

5. How can sunlight be used directly in everyday life?**Answer:**

1. Sunlight can be used to dry clothes and papads.
2. This allows us to use the Sun's energy without plugging in an electrical device.

6. How does a water wheel demonstrate energy?**Answer:**

1. Flowing water makes the water wheel spin.
2. This demonstrates that moving water can provide energy for movement.

7. Mention two electrical safety precautions.**Answer:**

1. Never insert fingers or objects into electrical sockets.
2. Stay away from broken wires or fallen poles and inform an adult.

8. How are solar panels and windmills useful?**Answer:**

1. Solar panels use sunlight to generate electricity.
2. Windmills use wind to generate electricity.

D. Three-Mark Descriptive Questions:**1. Explain three ways in which energy makes things work.**

Answer:

1. Energy can make objects **move**.
2. Energy can produce **light and sound**.
3. Energy can also produce **heat or change temperature**.

2. Explain how the Sun, wind and water act as sources of energy.

Answer:

1. The Sun provides heat and can also be used to generate electricity.
2. Wind can produce movement and turn windmills.
3. Flowing or falling water can produce movement and generate electricity.

3. Explain how electricity is useful in our daily life.

Answer:

1. Electricity can produce movement, such as in a fan.
2. It can produce light, sound and heat in different appliances.
3. Electricity is widely used in homes, schools and industries.

4. Why should we prefer clean sources of energy?

Answer:

1. Burning fuels such as coal produces smoke and harmful gases.
2. The Sun, wind and water can provide energy without such smoke or waste pollution.
3. Therefore, clean sources help us obtain energy while reducing harm to the environment.

5. How can the design of a house help save energy?

Answer:

1. Properly placed windows can allow natural sunlight into rooms.
2. Doors, openings and courtyards can allow natural air to circulate.
3. Such designs keep houses bright and airy and can reduce additional energy use.

6. Explain the concept of stored energy with examples.

Answer:

1. Energy can be stored for use at a later time.
2. Our body stores energy that can be used when required.
3. Batteries also contain stored energy that can operate devices such as torches and toys.

E. Five-Mark Descriptive Questions:

1. Explain the different sources of energy discussed in the chapter.

Answer:

1. **Food** provides energy to humans and animals.
2. **Petrol and diesel** provide energy to vehicles.
3. **Electricity** provides energy to many appliances and machines.
4. The **Sun, wind and water** are natural sources of energy.
5. These different sources help living things, machines and devices perform various activities.

2. Explain five electrical safety rules that children should follow.

Answer:

1. Never touch electrical wires or devices while they are plugged in.
2. Never insert fingers, pens, sticks or other objects into sockets.
3. Stay away from broken wires and fallen electric poles.
4. Do not play near electric boxes or transformers.
5. Inform an adult about unsafe electrical situations instead of trying to repair them yourself.

3. Explain how we can use and save energy wisely.

Answer:

1. We should avoid unnecessary use of electricity.
2. We can use **energy-efficient LED bulbs** for lighting.
3. We can make greater use of natural sunlight and wind.
4. We should choose clean energy sources such as the Sun, wind and water whenever possible.
5. Using and saving energy wisely helps conserve resources and reduce pollution.

4. Explain five examples that demonstrate how energy makes things work.

Answer:

1. Escaping air makes an inflated **balloon move**.
2. A vibrating **rubber band produces sound**.
3. Sunlight can **warm water**.
4. Wind can make a **pinwheel rotate**.
5. Flowing water can make a **water wheel spin**.

5. Explain clean energy and its importance.

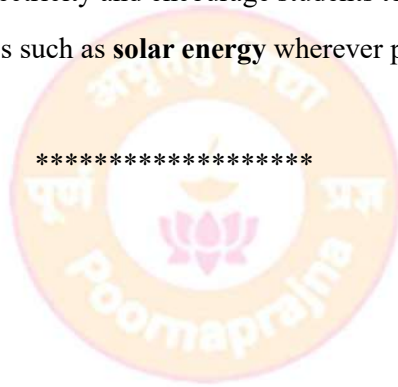
Answer:

1. The **Sun, wind and water** are natural sources that can provide clean energy.
2. Solar panels capture sunlight and turn it into electricity.
3. Windmills use moving air to generate electricity.
4. Fast-moving or falling water can also be used to produce electricity.
5. These sources are cleaner because they do not produce the smoke and harmful gases associated with burning fuels such as coal.

6. Your school wants to reduce its energy use. Suggest five practical measures.

Answer:

1. Replace less efficient bulbs with **LED bulbs**.
2. Use **natural sunlight** in classrooms whenever possible.
3. Make good use of natural airflow through windows and openings.
4. Avoid unnecessary use of electricity and encourage students to keep an **Energy Diary**.
5. Explore clean energy sources such as **solar energy** wherever practical.



5th Standard World Around Us Book Chapter 8

Chapter 8: Clothes — How Things are Made

8.1 Summary of the Chapter:

Summary:

- (1) **Weaving in Nature:** Nature provides many examples of weaving and stitching. The **baya weaverbird** weaves grass strands over and under one another to build a strong hanging nest, showing a process similar to human weaving.
- (2) **Meaning of Weaving:** Weaving is the process of crossing two sets of strips or threads—one **vertically** and the other **horizontally**—over and under each other to form cloth, mats, baskets and other objects. Natural materials such as bamboo, grass, jute, cotton, silk and coconut fibre can be woven.
- (3) **Indian Handloom Tradition:** India has a weaving tradition going back about **4,000 years**. Traditional weaving is done by hand using a **loom**, and the resulting fabric is called **handloom fabric**. Famous traditions include **Kanjeevaram, Pashmina and Ikat**.
- (4) **Importance of Weaving:** Weaving is not only used to make clothes; it also provides **livelihoods to many families** and preserves India's traditional skills, designs and cultural heritage. Modern textile mills use machines to spin thread and weave cloth in large quantities.
- (5) **From Fibre to Thread:** The thin, hair-like strands obtained from materials such as cotton are called **fibres**. The process of twisting fibres together to make **thread or yarn** is called **spinning**. A **charkha or spinning wheel** can be used for this purpose.
- (6) **Khadi and Self-Reliance:** During India's freedom struggle, **Gandhiji** encouraged people to spin cotton and weave their own cloth as a symbol of **self-sufficiency or Atmanirbharata**. Cloth made in this way is known as **khadi**.
- (7) **Natural and Synthetic Fibres:** **Natural fibres** come from natural sources and include cotton, bamboo, linen, wool and silk. **Synthetic fibres** are made by humans using artificial materials; examples include **nylon, rayon, polyester and terylene**.
- (8) **Silk and the Silkworm:** Silk is obtained from the **cocoon of the silk moth**. The chapter illustrates the silkworm's life cycle involving **eggs, caterpillar, cocoon and moth** and explains how silk thread is obtained from cocoons.
- (9) **Stitching and Embroidery:** Like a tailor, the **tailorbird** uses plant fibres or spider silk to stitch leaves together to make its nest. Humans use a **needle and thread** for stitching; a simple **running stitch** is made by repeatedly moving the needle up and down through cloth. Traditional Indian embroidery styles include **Chikankari, Banjara, Kantha, Gota, Phulkari, Toda, Kashmiri and Khneng embroidery**.
- (10) **Reuse and Recycling of Clothes:** Old clothes should not simply be thrown away. They can be **passed on, reused or recycled** into useful items such as quilts, mats, coasters and cleaning cloths, helping reduce waste and encouraging responsible use of materials.

8.2 Important Formulas:

Important Formulas / Quantitative Relationships:

This chapter is mainly **conceptual and activity-based**. It does **not contain mathematical formulas or numerical problem-solving formulas**. The important relationships students should remember are:

(1) Fibre → Spinning → Thread/Yarn

Fibres are twisted together through **spinning** to produce thread or yarn.

(2) Threads/Yarn → Weaving → Cloth/Fabric

Two sets of threads are crossed **over and under** each other to form fabric.

(3) Cotton fibres + Spinning = Cotton yarn/thread**(4) Yarn/Thread + Weaving = Fabric/Cloth****(5) Needle + Thread + Running Stitch = Joined pieces of cloth**

A running stitch follows an alternating **up–down–up–down** pattern through the cloth.

(6) Natural fibres = Fibres obtained from natural sources

Examples: **cotton, bamboo, linen, wool and silk.**

(7) Synthetic fibres = Human-made fibres from artificial materials

Examples given are **nylon, rayon, polyester and terylene.**

(8) Silkworm life-cycle sequence:

Egg → Caterpillar → Cocoon → Adult moth → Eggs again. The chapter's reflection activity further describes caterpillars feeding and growing before spinning cocoons.

8.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)**Fill in the Blanks – LOTS Type:**

- The male _____ weaver builds beautiful hanging nests from grass.
Answer: baya
- The baya weaver weaves strands _____ and under each other to make its nest strong.
Answer: over
- Combining strips or threads of material to form a patterned fabric is called _____.
Answer: weaving
- In weaving, one set of threads is placed vertically and the other set goes _____.
Answer: horizontally
- People have traditionally woven _____ fibre to make mats, baskets and sheets.
Answer: coconut
- If we weave with threads instead of paper strips, it becomes _____.
Answer: cloth
- Traditional weaving is done by hand on an instrument called a _____.
Answer: loom
- Cloth made by traditional hand weaving is called _____ fabric.
Answer: handloom
- _____ is a famous handloom tradition from Tamil Nadu.
Answer: Kanjeevaram
- Pashmina is a famous handloom tradition from _____.
Answer: Kashmir
- The process of twisting cotton fibres together to make thread or yarn is called _____.
Answer: spinning
- A _____ or spinning wheel helps to spin thread from cotton.
Answer: charkha
- A thin, hair-like strand obtained from cotton is called a _____.
Answer: fibre
- Cloth made by spinning thread from cotton and weaving it into fabric is known as _____.
Answer: khadi
- Cotton, bamboo, linen, wool and silk are examples of _____ fibres.
Answer: natural

16. Silk comes from the cocoon of an insect called the _____.
Answer: silk moth
17. In the life cycle of a silkworm, the caterpillar forms a _____.
Answer: cocoon
18. Nylon, rayon, polyester and terylene are examples of _____ fibres.
Answer: synthetic
19. Synthetic fibres are made by _____ using artificial materials.
Answer: humans
20. The tiny green bird that stitches its own nest is called the _____.
Answer: tailorbird
21. The tailorbird uses plant fibres or _____ silk to stitch leaves together.
Answer: spider
22. Tailors use a needle and _____ to sew pieces of cloth together.
Answer: thread
23. The basic stitch made by moving a needle up and down in a straight line is called a _____ stitch.
Answer: running
24. Chikankari originated in _____, Uttar Pradesh.
Answer: Lucknow
25. Phulkari embroidery originated in _____.
Answer: Punjab
26. Kantha embroidery originated in eastern Indian states such as West Bengal, Odisha and _____.
Answer: Tripura
27. Toda embroidery originated in _____.
Answer: Tamil Nadu
28. Khneng embroidery originated in _____.
Answer: Meghalaya
29. Beautiful _____ can be made by joining small pieces of old cloth together.
Answer: quilts
30. Old clothes can be reused and _____ instead of being thrown away.
Answer: recycled

8.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)

Fill in the Blanks with Answers – HOTS Type:

1. A basket maker crosses strips over and under one another. This method is called _____.
Answer: weaving
2. If the vertical and horizontal threads of a fabric are not properly interlocked, the fabric may become _____.
Answer: weak
3. Riya observes her shirt through a magnifying glass and notices a criss-cross arrangement. This indicates that the cloth has been _____.
Answer: woven
4. If cotton fibres are pulled into strands but are not twisted together, they will not form a strong _____.
Answer: thread (or yarn)
5. A craftsperson wants to convert cotton fibres into yarn before weaving. The process required is _____.
Answer: spinning

6. If you have yarn but no fabric, the next process needed to make cloth is _____.

Answer: weaving

7. A village artisan uses a manually operated loom instead of a textile mill. The cloth produced can be classified as _____ fabric.

Answer: handloom

8. A student finds a fibre obtained directly from a cotton plant. It should be classified as a _____ fibre.

Answer: natural

9. A fabric is made from nylon. Since nylon is made by humans using artificial materials, it is a _____ fibre.

Answer: synthetic

10. A weaver uses cotton, while another uses polyester. The first uses a natural fibre, whereas the second uses a _____ fibre.

Answer: synthetic

11. If a cocoon is processed in hot water and a fine thread is gently pulled from it, the fibre obtained is _____.

Answer: silk

12. A caterpillar has grown and is ready for the next important stage in the silkworm life cycle. It will spin a _____ around itself.

Answer: cocoon

13. If people spin cotton and weave the thread into fabric in the traditional way associated with self-sufficiency, the cloth produced is called _____.

Answer: khadi

14. A bird makes holes along the edges of a leaf and pulls plant fibre through them. This behaviour identifies it as a _____.

Answer: tailorbird

15. A tailor wants to join two pieces of cloth using a simple up-down pattern with a needle. The suitable stitch is the _____ stitch.

Answer: running

16. If one thread in a stitched cloth breaks, the stitches around it may begin to _____.

Answer: loosen

17. Meera wants to decorate a cloth using an embroidery tradition originating in Punjab. She should choose _____.

Answer: Phulkari

18. A student sees traditional embroidery from Lucknow, Uttar Pradesh. It is most likely _____.

Answer: Chikan (or Chikankari)

19. An embroidered cloth is identified as Toda embroidery. It can be associated with the state of _____.

Answer: Tamil Nadu

20. If embroidery comes from Meghalaya and is one of the traditions discussed in the chapter, it is called _____ embroidery.

Answer: Khneng

21. Instead of throwing away several small pieces of old cloth, they can be joined together to make a beautiful _____.

Answer: quilt

22. A child gives an outgrown shirt to a younger sibling instead of throwing it away. This is an example of _____ clothes.

Answer: reusing

23. If leftover pieces from a tailor's shop are stitched together to make a coaster, the activity demonstrates both stitching and _____.
Answer: reuse
24. Coconut fibre, palm reeds, bamboo and grass can all be used for making woven products because they are _____ materials.
Answer: natural
25. If a craftsperson wants to preserve traditional skills while earning a livelihood, _____ weaving can help achieve both purposes.
Answer: handloom
26. The baya weaverbird's nest becomes strong because the grass strands are woven _____ and under one another.
Answer: over
27. A student wants to join two pieces of old cloth without using glue. Based on the chapter activity, the student should use a needle, thread and a _____ stitch.
Answer: running
28. If a cloth is identified as Pashmina, the special goat associated with its wool is the _____.
Answer: Changthangi
29. A material that is hand-spun, hand-woven, strong and grown without chemicals or extra water is _____ cotton.
Answer: Kala (black)
30. Reusing old clothes rather than throwing them away helps reduce _____.
Answer: waste

These fill-ups require students to **apply, compare, classify, infer and connect concepts** rather than simply recall isolated facts. They cover **weaving, spinning, fibres, silk, stitching, embroidery, handloom traditions and recycling** from the chapter.

8.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

- What is weaving?**
Answer: Weaving is the process of combining strips or threads by crossing them over and under each other to form a patterned fabric.
- Which bird builds a hanging nest by weaving grass?**
Answer: The male baya weaverbird builds a hanging nest by weaving strands of grass.
- How are the two sets of threads arranged during weaving?**
Answer: One set of threads is placed vertically while the other goes horizontally.
- Name any two natural materials traditionally used for weaving.**
Answer: Bamboo and grass are two natural materials traditionally used for weaving.
- What is a loom?**
Answer: A loom is an instrument used for weaving cloth.
- What is handloom fabric?**
Answer: Cloth woven by hand on a loom is called handloom fabric.
- Name a famous handloom tradition from Tamil Nadu.**
Answer: Kanjeevaram is a famous handloom tradition from Tamil Nadu.
- What is spinning?**
Answer: Spinning is the process of twisting fibres together to make thread or yarn.
- What is a fibre?**
Answer: A fibre is a thin, hair-like strand that can be used to make thread.

10. What is a charkha?

Answer: A charkha is a spinning wheel used to spin thread from cotton.

11. What is khadi?

Answer: Khadi is cloth made by spinning thread from cotton and weaving it into fabric.

12. Name any two natural fibres mentioned in the chapter.

Answer: Cotton and wool are two natural fibres mentioned in the chapter.

13. From where is silk obtained?

Answer: Silk is obtained from the cocoon of the silk moth.

14. How is silk thread obtained from a cocoon?

Answer: Cocoons are put in hot water and the silk thread is gently pulled out.

15. What are synthetic fibres?

Answer: Synthetic fibres are fibres made by humans using artificial materials.

16. Name any two synthetic fibres.

Answer: Nylon and polyester are two synthetic fibres.

17. Name the four main stages shown in the life cycle of a silkworm.

Answer: The four stages shown are silkworm eggs, caterpillar, cocoon and moth.

18. Which bird stitches leaves together to make its nest?

Answer: The tailorbird stitches leaves together to make its nest.

19. What materials does a tailorbird use to stitch leaves?

Answer: A tailorbird uses plant fibres or spider silk to stitch leaves together.

20. What is a running stitch?

Answer: A running stitch is a basic stitch made by moving the needle up and down through the cloth in a straight line.

21. What are the two basic materials needed for stitching cloth?

Answer: A needle and thread are the two basic materials needed for stitching cloth.

22. Where did Chikankari originate?

Answer: Chikankari originated in Lucknow, Uttar Pradesh.

23. Where did Phulkari embroidery originate?

Answer: Phulkari embroidery originated in Punjab.

24. Where did Toda embroidery originate?

Answer: Toda embroidery originated in Tamil Nadu.

25. Where did Khneng embroidery originate?

Answer: Khneng embroidery originated in Meghalaya.

26. What is Bandhani?

Answer: Bandhani is a type of tie-dye in which small parts of cloth are tied and dyed to create patterns.

27. What can be made by joining small pieces of old cloth?

Answer: Beautiful quilts can be made by joining small pieces of old cloth.

28. Why is weaving important for many families in India?

Answer: Weaving is important because it provides work and livelihood to many families.

29. How do textile mills produce cloth in large quantities?

Answer: Textile mills use modern machines to spin thread and weave cloth in large quantities.

30. Why should we reuse old clothes?

Answer: We should reuse old clothes so that they remain useful instead of being thrown away.

8.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – HOTS Type:

1. **Why does the baya weaverbird weave grass strands over and under one another?**
Answer: The baya weaverbird weaves the strands over and under one another to make its nest strong.
2. **What would happen if the threads in woven cloth were not properly crossed?**
Answer: The cloth would not form a strong and unified fabric because the threads would not be properly interlocked.
3. **How can you identify that a piece of cloth has been woven?**
Answer: We can identify woven cloth by observing its criss-cross pattern of threads closely.
4. **Why can materials such as bamboo, grass and jute be used for weaving?**
Answer: They can be arranged over and under one another to form useful woven objects such as mats and baskets.
5. **Why is handloom weaving important apart from producing cloth?**
Answer: Handloom weaving provides livelihoods to families and helps preserve traditional skills and designs.
6. **Why are modern machines used in textile mills?**
Answer: Modern machines enable textile mills to spin thread and weave cloth in large quantities.
7. **Why does twisting cotton fibres make the strand stronger?**
Answer: Twisting binds the cotton fibres together and forms a stronger thread or yarn.
8. **What process should you use if you have cotton fibres and want to make yarn?**
Answer: You should use the process of spinning to convert cotton fibres into yarn.
9. **If you already have yarn, what process would you use next to make cloth?**
Answer: You would weave the yarn to make cloth.
10. **Why did khadi become a symbol of self-sufficiency during the freedom struggle?**
Answer: Khadi represented people's ability to spin their own thread and weave their own cloth.
11. **How would you classify cotton and polyester based on their sources?**
Answer: Cotton is a natural fibre, whereas polyester is a synthetic fibre.
12. **A fibre is obtained from the cocoon of an insect; which fibre is it likely to be?**
Answer: The fibre is likely to be silk because silk comes from the cocoon of the silk moth.
13. **Why are nylon and polyester different from cotton and wool?**
Answer: Nylon and polyester are human-made synthetic fibres, whereas cotton and wool are natural fibres.
14. **What can you infer when a caterpillar begins spinning a cocoon around itself?**
Answer: We can infer that the caterpillar has reached the cocoon stage of the silk moth's life cycle.
15. **How is a tailorbird similar to a human tailor?**
Answer: Both join materials by passing thread-like fibres through them to create a stitched structure.
16. **Why does the tailorbird stitch the edges of a large leaf together?**
Answer: It stitches the leaf edges together to make a soft and safe nest for laying eggs and raising its young.
17. **Which stitch would you choose to join two small pieces of cloth in the chapter activity, and why?**
Answer: I would choose the running stitch because it can be used to join two pieces of cloth.

18. What may happen if one thread in a stitched cloth breaks?

Answer: The surrounding stitches may become loose and the joined cloth may begin to come apart.

19. Why should a needle be handled carefully during stitching activities?

Answer: A needle should be handled carefully because careless handling can cause injury.

20. How can embroidery tell us about India's cultural diversity?

Answer: Different regions have their own embroidery styles, reflecting the traditions of their places and people.

21. If you see Phulkari embroidery, with which state would you associate it?

Answer: I would associate Phulkari embroidery with Punjab.

22. If an embroidery style comes from Meghalaya, which style from the chapter could it be?

Answer: It could be Khneng embroidery.

23. How would you identify Kantha embroidery by its place of origin?

Answer: Kantha can be associated with eastern Indian states such as West Bengal, Odisha and Tripura.

24. How can an old shirt that no longer fits you still be useful?

Answer: It can be given to someone else who can use it or reused to make another useful item.

25. Why is making quilts from old pieces of cloth a good practice?

Answer: It gives old cloth a new use instead of throwing it away.

26. What would you suggest doing with leftover cloth pieces from a tailor's shop?

Answer: I would suggest stitching them together to make useful items such as mats, coasters or cleaning cloths.

27. Why should old clothes not be immediately thrown away?

Answer: Old clothes can often be reused, passed on to others or converted into useful items.

28. Why is every thread important in a woven mat?

Answer: Each thread contributes to the interlocked structure that keeps the woven mat together.

29. If a cloth is smooth, shiny and thin, what should a student do before deciding what fibre it is made from?

Answer: The student should closely observe its properties and compare them with the different cloth materials studied in the chapter.

30. How does learning weaving and stitching help us understand the value of handmade products?

Answer: It helps us appreciate the skill and effort required to turn fibres, threads and pieces of cloth into useful products.

8.7 Two-mark questions with Answers of LOTS Type: (20 Questions)**Two-Mark Descriptive Questions with Answers – LOTS Type:****1. What is weaving? How are threads arranged during weaving?**

Answer:

1. Weaving is the process of combining strips or threads to form a patterned fabric.
2. One set of threads is placed vertically while another goes horizontally, crossing over and under each other.

2. How does the baya weaverbird make its nest?

Answer:

1. The male baya weaverbird builds a hanging nest using strands of grass.
2. It weaves the strands over and under each other to make the nest strong.

3. Name four natural materials traditionally used for weaving.

Answer:

1. Coconut fibre, palm reeds, bamboo and grass are natural materials used for weaving.
2. Jute, cotton and silk are also used for making woven products.

4. What is handloom fabric? Name two Indian handloom traditions.

Answer:

1. Cloth traditionally woven by hand on a loom is called handloom fabric.
2. Kanjeevaram and Pashmina are two famous Indian handloom traditions.

5. Why is weaving important in India?

Answer:

1. Weaving provides work and livelihood to many families.
2. It also helps keep India's traditional skills and designs alive.

6. What is spinning? Which instrument is used for spinning cotton?

Answer:

1. Spinning is the process of twisting cotton fibres together to make thread or yarn.
2. A charkha or spinning wheel is used to spin thread from cotton.

7. What is a fibre? Give two examples of natural fibres.

Answer:

1. A fibre is a thin, hair-like strand that can be used to make thread.
2. Cotton and wool are examples of natural fibres.

8. What is khadi? What did it symbolize during India's freedom struggle?

Answer:

1. Khadi is cloth made by spinning thread from cotton and weaving it into fabric.
2. It became a symbol of self-sufficiency and the freedom struggle.

9. How is silk obtained?

Answer:

1. Silk is obtained from the cocoon of the silk moth.
2. The cocoons are put in hot water and the silk thread is gently pulled out.

10. What are natural and synthetic fibres?

Answer:

1. Natural fibres come from natural sources, with examples including cotton, bamboo, linen, wool and silk.
2. Synthetic fibres are made by humans using artificial materials, such as rayon, nylon, polyester and terylene.

11. Describe the life cycle of the silkworm shown in the chapter.

Answer:

1. The life cycle begins with silkworm eggs, which develop into caterpillars.
2. The caterpillar forms a cocoon, from which the moth later emerges.

12. How does a tailorbird make its nest?

Answer:

1. The tailorbird makes holes along the edges of a large leaf using its beak.
2. It uses plant fibres or spider silk to sew the leaf edges together and make a nest.

13. What is a running stitch? How is it made?

Answer:

1. A running stitch is a basic stitch used for stitching pieces of fabric.
2. It is made by moving the needle repeatedly up and down through the cloth in a straight line.

14. Mention any four traditional embroideries of India and their places of origin.**Answer:**

1. Chikankari originated in Lucknow, Uttar Pradesh, while Banjara originated in Rajasthan.
2. Phulkari originated in Punjab, while Toda embroidery originated in Tamil Nadu.

15. What is Bandhani? How are its patterns created?**Answer:**

1. Bandhani is a traditional type of tie-dye.
2. Small parts of cloth are tied and dyed to create dots, circles and other patterns.

16. What is Pashmina wool and where does it come from?**Answer:**

1. Pashmina wool comes from a special goat called the Changthangi.
2. This goat is found high in the cold mountains of Ladakh.

17. How can old clothes be reused?**Answer:**

1. Clothes that no longer fit can be given to younger siblings or other people who can use them.
2. Old clothes can also be converted into other useful items or joined together to make quilts.

18. What is special about Kala cotton?**Answer:**

1. Kala cotton grows without chemicals or extra water.
2. It is hand-spun and woven by weavers in Gujarat into strong, eco-friendly fabric.

19. What useful articles can be made by stitching leftover pieces of cloth?**Answer:**

1. Leftover pieces of cloth can be joined using a simple running stitch.
2. They can be made into a tablecloth, mat, coaster or cleaning cloth.

20. What safety precautions should be followed while stitching?**Answer:**

1. Needles should be handled carefully to avoid injury.
2. Students should follow instructions properly and should never play with needles.

8.8. Two-mark questions with Answers of HOTS Type: (20 Questions)**Two-Mark Descriptive Questions with Answers – HOTS Type:****1. Why does the baya weaverbird weave grass strands over and under one another instead of simply placing them together?****Answer:**

1. Crossing the strands over and under interlocks them and makes the nest stronger.
2. This arrangement helps the hanging nest remain together and support its structure.

2. A student observes a piece of cloth through a magnifying glass and notices a criss-cross pattern. What can the student conclude?**Answer:**

1. The student can conclude that the cloth has been made by weaving threads together.
2. The criss-cross pattern is formed when threads pass over and under one another.

3. What might happen if the threads in a woven mat are not properly interlocked?**Why?****Answer:**

1. The mat may become loose or start coming apart.
2. Proper interlocking of the threads is necessary to form a unified and strong material.

4. Why should traditional handloom weaving be encouraged even though textile mills can produce cloth quickly?

Answer:

1. Handloom weaving provides work and livelihood to many families.
2. It also helps preserve India's traditional skills, patterns and cultural heritage.

5. A cotton strand becomes stronger when it is twisted. What does this observation teach us about spinning?

Answer:

1. Twisting brings cotton fibres together to form a stronger strand.
2. This process of twisting fibres into thread or yarn is called spinning.

6. If you are given cotton fibres and asked to make a piece of cloth, which two main processes would you use?

Answer:

1. First, I would spin the cotton fibres to make thread or yarn.
2. Then, I would weave the threads together to make cloth.

7. How would you distinguish cotton from polyester based on the classification given in the chapter?

Answer:

1. Cotton is classified as a natural fibre because it comes from a natural source.
2. Polyester is classified as a synthetic fibre because it is made by humans using artificial materials.

8. Why did spinning and weaving khadi become symbols of self-sufficiency during India's freedom struggle?

Answer:

1. People could spin cotton and weave their own cloth instead of depending on others.
2. Therefore, khadi represented the idea of becoming self-sufficient or **atmanirbhar**.

9. A caterpillar is seen spinning a cocoon around itself. What will happen next in its life cycle?

Answer:

1. The caterpillar will remain inside the cocoon as part of its development.
2. Later, an adult moth will emerge from the cocoon.

10. How is the tailorbird's nest-making technique similar to human stitching?

Answer:

1. The tailorbird makes holes in leaf edges and pulls plant fibres or spider silk through them.
2. Similarly, a tailor passes thread through cloth with a needle to join pieces together.

11. If two pieces of cloth have to be joined using the technique learned in the chapter, what would you do?

Answer:

1. I would place the pieces slightly overlapping each other and use a needle and thread.
2. I would join them using a simple running stitch.

12. What might happen if one thread breaks in a line of stitching? Explain why.

Answer:

1. The stitches may begin to loosen and the joined pieces may start separating.
2. This shows that each thread plays an important role in keeping the stitched material together.

13. Why can traditional embroidery be considered a reflection of India's cultural diversity?

Answer:

1. Different regions of India have developed their own distinctive embroidery traditions.

2. Examples include Phulkari from Punjab, Toda from Tamil Nadu and Khneng embroidery from Meghalaya.

14. Your friend has an old shirt that no longer fits. Suggest two better options than throwing it away.

Answer:

1. The shirt can be given to a younger sibling or another person who can use it.
2. It can also be reused to make another useful item.

15. Why is making a quilt from leftover pieces of cloth a good example of recycling or reuse?

Answer:

1. Small pieces of old cloth that might otherwise be discarded are used again.
2. Joining these pieces creates a new and useful product such as a quilt.

16. A student wants an eco-friendly fabric mentioned in the chapter. Why could Kala cotton be a suitable choice?

Answer:

1. Kala cotton grows without chemicals or extra water.
2. It is hand-spun and woven into strong, eco-friendly fabric.

17. Why should students handle needles carefully during stitching activities?

Answer:

1. A needle is sharp and can cause injury if handled carelessly.
2. Therefore, students should follow instructions and never play with needles.

18. How can leftover cloth pieces from a tailor's shop be turned into useful objects?

Answer:

1. The leftover pieces can be arranged and joined together using running stitches.
2. They can be transformed into a mat, coaster, tablecloth or cleaning cloth.

19. Why is every thread important in a woven mat or stitched cloth?

Answer:

1. Each thread contributes to holding the structure together.
2. If a thread breaks, part of the woven or stitched material may become loose.

20. Handloom weaving uses no electricity according to the chapter. What environmental advantage can you infer from this?

Answer:

1. Handloom weaving can make cloth without consuming electricity during the weaving process.
2. Therefore, the chapter describes it as an **eco-friendly and sustainable** practice.

8.9. Three-mark questions with Answers of LOTS Type: (17 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type

1. Explain how the baya weaverbird makes its nest.

Answer:

1. The male baya weaverbird builds a beautiful hanging nest using strands of grass.
2. It weaves the strands over and under one another to make the nest strong.
3. The finished nest is shaped like a pouch and hangs from the branch of a tree.

2. What is weaving? Explain how threads are arranged during weaving.

Answer:

1. Weaving is the process of combining strips or threads of a material to form a patterned fabric.
2. One set of threads is placed vertically and another set goes horizontally.
3. The threads are carefully crossed over and under one another to form a unified fabric.

3. Describe the tradition of handloom weaving in India.**Answer:**

1. People in India knew how to weave even about 4,000 years ago.
2. Traditional weaving is done by hand on an instrument called a **loom**, and the cloth produced is called **handloom fabric**.
3. Famous Indian handloom traditions include Kanjeevaram from Tamil Nadu, Pashmina from Kashmir and Ikat from Odisha and Gujarat.

4. Explain the importance of weaving in India.**Answer:**

1. Weaving is used to make clothes and many other useful products.
2. It provides work and livelihood to many families.
3. It also keeps India's traditional skills and designs alive.

5. Explain the process of spinning cotton into thread.**Answer:**

1. Cotton is gently pulled out to form a strand.
2. The strand is twisted so that the fibres come together and become stronger.
3. This process of twisting cotton fibres together to make thread or yarn is called **spinning**.

6. What are fibres? Name different natural fibres mentioned in the chapter.**Answer:**

1. A fibre is a thin, hair-like strand obtained when a cotton strand is untwisted.
2. Fibres can be obtained from different natural sources.
3. Bamboo, cotton, linen, wool and silk are natural fibres mentioned in the chapter.

7. Explain the importance of khadi during India's freedom struggle.**Answer:**

1. Gandhiji encouraged people to become self-sufficient by making their own cloth.
2. People spun thread from cotton and wove it into fabric.
3. This cloth, called **khadi**, became a symbol of the freedom struggle and **atmanirbharta**.

8. Describe how silk is obtained from the silk moth.**Answer:**

1. Silk comes from the cocoon of an insect called the silk moth.
2. The cocoons are placed in hot water.
3. Silk thread is gently pulled out from the cocoons and made into thread used for silk fabric.

9. Differentiate between natural and synthetic fibres with examples.**Answer:**

1. Natural fibres are obtained from natural sources and include cotton, bamboo, linen, wool and silk.
2. Synthetic fibres are made by humans using artificial materials.
3. Rayon, nylon, polyester and terylene are examples of synthetic fibres.

10. Describe the life cycle of the silk moth as explained in the chapter.**Answer:**

1. A silk moth lays eggs, which hatch into tiny caterpillars.
2. The caterpillars eat mulberry leaves, grow bigger and spin cocoons around themselves.
3. An adult moth comes out of the cocoon, and the life cycle begins again.

11. Explain how the tailorbird makes its nest.**Answer:**

1. The tailorbird uses its beak to make holes along the edges of a large leaf.

2. It pulls plant fibres or spider silk through the holes to sew the leaf edges together.
3. It pads the leaf sleeve to make a soft and safe nest for laying eggs and raising its babies.

12. Explain how to make a basic running stitch.

Answer:

1. Thread a needle, tie a knot at one end and bring the needle up through the cloth from the back.
2. Push the needle down through the cloth and then bring it up again a short distance away.
3. Continue moving the needle up and down in a straight line to form a **running stitch**.

13. How can two pieces of cloth be joined using a running stitch?

Answer:

1. Place one piece of cloth flat and put the second piece over it with a slight overlap.
2. Use a needle and thread to make a simple running stitch through both pieces.
3. More pieces can be added to make items such as a tablecloth, mat, coaster or cleaning cloth.

14. Name any three traditional embroideries of India and mention their places of origin.

Answer:

1. **Chikankari** originated in Lucknow, Uttar Pradesh.
2. **Phulkari** originated in Punjab.
3. **Toda embroidery** originated in Tamil Nadu.

15. Explain how old clothes can be reused and recycled.

Answer:

1. Clothes that no longer fit can be given to younger siblings or other people who can use them.
2. Old clothes can also be changed into other useful objects.
3. Small pieces of old cloth can be joined together to make beautiful quilts.

16. Write three points about Kala cotton.

Answer:

1. Kala cotton grows without chemicals or extra water.
2. It is hand-spun and woven into strong, eco-friendly fabric.
3. Weavers in Gujarat make fabric using Kala cotton.

17. Write three safety points to remember while stitching with a needle and thread.

Answer:

1. Stitching with a needle and thread must be done carefully.
2. Students should not play with needles because they can cause injury.
3. Students should follow the teacher's instructions while performing stitching activities.

8.10. Three-mark questions with Answers of HOTS Type: (20 Questions)

Three-Mark Descriptive Questions with Answers – HOTS Type:

1. A student finds that loosely arranged threads separate easily, while woven threads stay together. Why does this happen?

Answer:

1. In weaving, vertical and horizontal threads cross over and under one another.
2. This criss-cross arrangement interlocks the threads and forms a unified fabric.
3. Therefore, properly woven threads hold together better than loosely arranged threads.

2. What can humans learn from the nest-building technique of the baya weaverbird?

Answer:

1. The baya weaverbird shows how strands can be woven over and under one another.

2. This arrangement helps it create a strong hanging nest from grass.
3. Humans use a similar basic principle of weaving to make cloth, mats and baskets.

3. A village has skilled handloom weavers, but people are beginning to buy only machine-made cloth. Why should the handloom tradition also be supported?

Answer:

1. Handloom weaving provides work and livelihood to many families.
2. Supporting handloom products helps preserve traditional skills, patterns and designs.
3. Thus, handloom weaving is important for both people's livelihoods and India's cultural heritage.

4. You are given a ball of cotton and asked to make a small piece of cloth. Explain the main processes you would follow.

Answer:

1. First, I would pull cotton into strands and twist the fibres together by spinning to make yarn.
2. Next, I would arrange the threads vertically and horizontally and weave them over and under one another.
3. The interwoven threads would finally form a piece of cloth.

5. Cotton and polyester are both used to make clothes, but why are they placed in different groups?

Answer:

1. Cotton is grouped as a natural fibre because it comes from a natural source.
2. Polyester is grouped as a synthetic fibre because it is made by humans using artificial materials.
3. Therefore, fibres are classified according to their source, even though both types can be used in everyday products.

6. Why did Gandhiji encourage people to spin and weave their own cloth during the freedom struggle?

Answer:

1. Spinning and weaving allowed people to make cloth for themselves.
2. It encouraged people to become self-sufficient rather than depend on others for cloth.
3. Hence, khadi became a symbol of the freedom struggle and the path towards **atmanirbharta**.

7. A child observes a caterpillar spinning a cocoon. Predict the next stages and explain how the cycle continues.

Answer:

1. The caterpillar remains inside the cocoon as it develops.
2. An adult moth eventually comes out of the cocoon.
3. The adult moth lays eggs, beginning the life cycle again.

8. Compare the stitching technique of a tailorbird with that of a human tailor.

Answer:

1. A tailorbird makes holes along leaf edges and pulls plant fibres or spider silk through them.
2. A human tailor uses a needle to pass thread through pieces of cloth.
3. Both use a thread-like material to join separate edges or pieces together.

9. Suppose one thread breaks in a stitched cloth. What could happen, and what does this show about the importance of each thread?

Answer:

1. The stitches near the broken thread may begin to loosen.
2. The pieces of cloth may gradually start separating at that place.
3. This shows that each thread contributes to keeping the stitched material together.

10. You have several small pieces of leftover cloth from a tailor's shop. How could you turn them into a useful product?

Answer:

1. I would arrange the pieces so that their edges slightly overlap.
2. I would join them together carefully using a needle, thread and running stitches.
3. The joined pieces could be made into a mat, coaster, tablecloth or cleaning cloth.

11. How do different embroidery traditions help us understand India's cultural diversity?

Answer:

1. Different regions of India have developed their own embroidery styles and techniques.
2. For example, Phulkari is associated with Punjab, Toda with Tamil Nadu and Khneng embroidery with Meghalaya.
3. These regional styles show how stitching and decoration can represent the traditions of different places and people.

12. Your clothes have become too small for you but are still in good condition. What should you do with them and why?

Answer:

1. I could give the clothes to a younger sibling or another person who can use them.
2. I could also reuse the cloth to make another useful object.
3. These choices keep usable clothes from being unnecessarily thrown away.

13. Why can Kala cotton be considered an environmentally friendly material based on the chapter?

Answer:

1. Kala cotton grows without the use of chemicals.
2. It also grows without requiring extra water.
3. It is hand-spun and woven into strong fabric, which the chapter describes as eco-friendly.

14. A student wants to know whether an unknown cloth is cotton, wool, silk, jute, polyester or nylon. How can the student investigate it using the chapter activity?

Answer:

1. The student can observe whether the cloth feels smooth or rough and whether it is thick or thin.
2. The student can also check whether the cloth is shiny and stretchy.
3. These observations can then be compared with known cloth samples to suggest what the material may be.

15. Why is learning a simple running stitch useful in everyday life? Give examples from the chapter.

Answer:

1. A running stitch can be used to join two pieces of cloth together.
2. It can help students understand how stitching is used to make or repair fabric articles.
3. The same technique can be used with leftover cloth to create items such as mats, coasters and cleaning cloths.

16. Handloom weaving does not use electricity according to the chapter. Why can this be considered an advantage?

Answer:

1. Handloom cloth can be woven without depending on electrical power.
2. This makes the weaving process more eco-friendly and sustainable.
3. At the same time, handloom weaving supports the livelihoods of thousands of families.

8.11 Five-mark questions with Answers of LOTS Type: (12 Questions)**Five-Mark Descriptive Questions with Answers – LOTS Type:****1. Explain the process of weaving and describe its importance in India.****Answer:**

1. **Weaving** is the process of combining strips or threads by crossing them over and under one another to form a patterned fabric.
2. In weaving, one set of threads is arranged vertically while another set goes horizontally.
3. Traditional weaving is done by hand using an instrument called a **loom**, and the cloth produced is called **handloom fabric**.
4. India has famous handloom traditions such as **Kanjeevaram, Pashmina and Ikat**.
5. Weaving provides livelihoods to many families and helps preserve India's traditional skills and designs.

2. Explain how cotton fibres are converted into cloth.**Answer:**

1. Cotton contains thin, hair-like strands called **fibres**.
2. Cotton fibres are pulled into strands and twisted together to make them stronger.
3. The process of twisting fibres together to make thread or yarn is called **spinning**.
4. A **charkha or spinning wheel** can be used to spin cotton into thread.
5. The threads are then woven over and under one another to produce **cloth or fabric**.

3. Explain natural and synthetic fibres with suitable examples.**Answer:**

1. Fibres used for making fabrics can be obtained from natural sources or made artificially.
2. **Natural fibres** mentioned in the chapter include bamboo, cotton, linen, wool and silk.
3. Silk is obtained from the **cocoon of the silk moth**.
4. **Synthetic fibres** are made by humans using artificial materials.
5. Rayon, nylon, polyester and terylene are examples of synthetic fibres.

4. Describe the life cycle of the silk moth.**Answer:**

1. The life cycle begins when the **silk moth lays eggs**.
2. The eggs hatch into tiny **caterpillars**.
3. The caterpillars eat **mulberry leaves** and grow bigger.
4. The caterpillars spin **cocoons** around themselves, from which adult moths later emerge.
5. The adult moths lay eggs again, and the **life cycle repeats**.

5. Describe how a tailorbird makes its nest.**Answer:**

1. The **tailorbird** is a small green bird that stitches its own nest.
2. It selects a large leaf and uses its beak to make holes along the edges.
3. It uses **plant fibres or spider silk** as thread.
4. It pulls the thread through the holes with its beak and sews the edges of the leaf together.
5. It pads the leaf sleeve to create a soft and safe nest for laying eggs and raising its babies.

6. Explain how to make a running stitch and use it to join two pieces of cloth.**Answer:**

1. Take a piece of thread through a needle and tie a knot at one end.
2. Bring the needle up from the back of the cloth and then push it down a short distance away.
3. Continue moving the needle **up and down in a straight line** to make a running stitch.
4. To join two pieces of cloth, place them slightly overlapping and stitch through both pieces.

5. Joined cloth pieces can be used to make a **tablecloth, mat, coaster or cleaning cloth**.

7. Describe five traditional embroidery styles of India and their places of origin.

Answer:

1. **Chikan or Chikankari** originated in Lucknow, Uttar Pradesh.
2. **Banjara** embroidery originated in Rajasthan.
3. **Kantha** originated in eastern Indian states such as West Bengal, Odisha and Tripura.
4. **Phulkari** originated in Punjab.
5. **Toda** embroidery originated in Tamil Nadu.

8. Explain the importance of reusing and recycling old clothes.

Answer:

1. Clothes that no longer fit us need not be thrown away.
2. They can be passed on to a younger sibling or another person who can use them.
3. Old clothes can also be converted into other useful objects.
4. Small pieces of old cloth can be joined together to make **beautiful quilts**.
5. Thus, reusing old clothes gives the material another useful purpose instead of discarding it.

9. Explain the role of khadi in India's freedom struggle.

Answer:

1. **Gandhiji** emphasized the importance of becoming self-sufficient.
2. People were encouraged to spin thread from cotton and weave their own fabric.
3. A **charkha** or spinning wheel was used to spin cotton into thread.
4. Cloth made by spinning and weaving in this way is known as **khadi**.
5. Khadi became a symbol of the **freedom struggle and the path towards atmanirbharta**.

10. Write five points about the different materials and methods used for making clothes and other useful articles.

Answer:

1. Natural materials such as coconut fibre, bamboo, grass, jute, cotton and silk can be used for weaving.
2. Cotton fibres can be **spun into thread**, which can then be woven into cloth.
3. Natural fibres include cotton, bamboo, linen, wool and silk, while synthetic fibres include rayon, nylon, polyester and terylene.
4. Pieces of fabric can be joined using a **needle, thread and stitches** such as the running stitch.
5. Old and leftover cloth can be reused to make useful articles such as **mats, coasters, cleaning cloths and quilts**.

8.12 Five-mark questions with Answers of HOTS Type: (5 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. Suppose you are given raw cotton and asked to make a piece of cloth. Explain the steps you would follow and why each step is necessary.

Answer:

1. First, I would pull the cotton gently to obtain strands containing thin **fibres**.
2. I would twist the cotton fibres together because twisting makes the strand stronger.
3. This process, called **spinning**, converts the fibres into thread or yarn.
4. I would then arrange threads vertically and horizontally and weave them over and under one another.
5. The interlocking threads would finally form a unified **cloth or fabric**.

2. A village has skilled handloom weavers, but people increasingly prefer machine-made cloth. Why should the handloom tradition still be preserved?

Answer:

1. Handloom weaving provides **work and livelihood** to many families.
2. It helps preserve traditional skills and designs that have been passed down through generations.
3. Different handloom traditions, such as Kanjeevaram, Pashmina and Ikat, represent India's cultural diversity.
4. Unlike textile mills that use modern machines, traditional handloom fabric is woven by hand on a loom.
5. Therefore, supporting handloom weaving helps protect both people's livelihoods and India's traditional heritage.

3. Compare the nest-making methods of the baya weaverbird and the tailorbird. What can we learn from them?

Answer:

1. The baya weaverbird **weaves** grass strands over and under one another to make a strong hanging nest.
2. The tailorbird makes holes along leaf edges and **stitches** them together using plant fibres or spider silk.
3. The baya's technique resembles human weaving, while the tailorbird's technique resembles stitching.
4. Both birds skillfully combine natural materials to create strong and useful structures.
5. Their nests show that weaving and stitching-like techniques can also be observed in nature.

4. You have several old clothes and leftover cloth pieces at home. Suggest how you could reuse them instead of throwing them away.

Answer:

1. Clothes that are still usable can be passed on to younger siblings or other people.
2. Old clothes can be converted into other useful articles instead of being discarded.
3. Small leftover pieces can be placed together with their edges slightly overlapping.
4. They can be joined using a **running stitch** to make a mat, coaster, tablecloth or cleaning cloth.
5. Small pieces of old cloth can also be joined together to make beautiful **quilts**.

5. A student is given cotton, silk, wool, nylon and polyester. How would you classify these materials and explain your classification?

Answer:

1. I would first classify the materials into **natural fibres** and **synthetic fibres**.
2. Cotton, silk and wool would be placed under natural fibres because the chapter identifies them as fibres from natural sources.
3. Silk is specifically obtained from the cocoon of the **silk moth**.
4. Nylon and polyester would be placed under synthetic fibres because they are made by humans using artificial materials.
5. Thus, the materials can be classified according to whether they come from natural sources or are artificially made.

6. If one thread breaks in a woven mat or stitched cloth, what may happen? Explain the importance of each thread.

Answer:

1. In woven material, threads cross over and under one another to form a unified structure.
2. In stitched material, thread helps hold separate pieces of cloth together.
3. If one thread breaks, the material around that point may begin to loosen.

4. Continued loosening can weaken the woven or stitched structure and may cause parts to separate.
5. Therefore, each thread contributes to the strength and stability of the finished material.

7. Gandhiji encouraged people to spin and weave their own cloth. How did this practice promote self-sufficiency?

Answer:

1. People could obtain cotton and spin its fibres into thread themselves.
2. They could then weave the thread into fabric instead of depending entirely on externally produced cloth.
3. A **charkha or spinning wheel** helped people spin cotton thread.
4. The cloth produced through this process was known as **khadi**.
5. Hence, spinning and weaving khadi became a symbol of the freedom struggle and the path towards **atmanirbharta**.

8. You find an unknown piece of cloth. How would you investigate its properties before deciding what material it may be made from?

Answer:

1. I would first touch the cloth and observe whether it feels **smooth or rough**.
2. I would examine whether the material is **thick or thin**.
3. I would observe whether its surface appears **shiny**.
4. I would also check whether the cloth is **stretchy**.
5. I would compare these observations with different cloth samples and then suggest whether it might be cotton, wool, silk, jute, polyester or nylon.

9. Why can traditional embroidery be considered more than just decoration? Explain with examples.

Answer:

1. Different parts of India use different kinds of stitches not only to join cloth but also to decorate it.
2. The chapter explains that each traditional stitch can tell us about a **place, its people and their traditions**.
3. For example, **Chikankari** is associated with Lucknow, Uttar Pradesh.
4. **Phulkari** is associated with Punjab, while **Toda embroidery** is associated with Tamil Nadu.
5. Therefore, traditional embroidery also represents India's regional traditions and cultural diversity.

10. Kala cotton and handloom weaving are described as eco-friendly practices in the chapter. Explain why.

Answer:

1. **Kala cotton** grows without chemicals or extra water.
2. It is hand-spun and woven into strong, eco-friendly fabric by weavers in Gujarat.
3. The chapter also states that **handloom weaving uses no electricity**.
4. This makes handloom weaving an eco-friendly and sustainable method of producing cloth.
5. At the same time, handloom weaving supports families who depend on traditional weaving for their livelihood.

8.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Your class receives several pieces of old cloth from a tailor's shop. Explain how you would reuse them to make a useful article.

Answer:

1. I would collect and arrange the leftover cloth pieces according to their size and shape.
2. I would place two pieces together with their edges slightly overlapping.
3. Using a needle and thread, I would join them with a simple **running stitch**.
4. I would continue adding and stitching more pieces until the required size is obtained.
5. The finished material could be used as a **tablecloth, mat, coaster or cleaning cloth**, thereby giving leftover cloth a new use.

2. You are given cotton fibres and asked to demonstrate how they can eventually become cloth. Explain the process you would follow.

Answer:

1. I would gently pull the cotton to form a thin strand.
2. I would twist the fibres together so that the strand becomes stronger.
3. This process of twisting fibres to make thread or yarn is called **spinning**.
4. I would then arrange the threads vertically and horizontally and cross them over and under one another.
5. By continuing this **weaving** process, the threads would form a unified piece of cloth.

3. Your younger sibling needs to understand the difference between natural and synthetic fibres. How would you explain it using examples from everyday clothing?

Answer:

1. I would explain that **natural fibres** come from natural sources, while **synthetic fibres** are made by humans using artificial materials.
2. I would show cotton, wool or silk clothing as examples made from natural fibres.
3. I would show articles made of nylon or polyester as examples of synthetic fibres.
4. I would explain that silk is obtained from the **cocoon of the silk moth**.
5. I would then ask my sibling to classify different clothes or bags at home as natural or synthetic based on their material.

4. Your shirt gets a small tear while you are at home. Using what you learned in the chapter, explain how you could repair it.

Answer:

1. I would take a suitable needle and thread and handle the needle carefully.
2. I would thread the needle and tie a knot at one end of the thread.
3. I would bring the needle up through the cloth near the tear and push it down again a short distance away.
4. I would continue the **up-down movement** to make a simple running stitch along the tear.
5. After joining the torn edges, I would secure the thread so that the stitches remain in place.

5. Your family has several clothes that no longer fit anyone. Suggest an environmentally responsible plan for using them.

Answer:

1. I would first separate clothes that are still in good condition from those that are worn out.
2. Good clothes could be given to younger siblings or other people who can use them.
3. Suitable old clothes could be converted into other useful household articles.
4. Small pieces could be joined together to make **quilts** or other stitched products.
5. In this way, the clothes would be reused instead of being unnecessarily thrown away.

6. During a school activity, you are given paper strips and asked to demonstrate how weaving works. How would you perform the activity?

Answer:

1. I would take five or six paper strips and tape them at the top of a surface.

2. I would take another set of strips and pass one through the first set in an **over-under-over-under** pattern.
3. I would continue repeating the same pattern with the remaining strips.
4. The crossed strips would gradually form a woven **mat-like structure**.
5. I would explain that cloth is made on the same basic principle when **threads** are woven instead of paper strips.

7. You visit a handloom exhibition and see Kanjeevaram, Pashmina and Ikat fabrics. Explain what you would tell your friends about their importance.

Answer:

1. I would explain that India has a very old tradition of weaving that goes back thousands of years.
2. **Kanjeevaram** is associated with Tamil Nadu, **Pashmina** with Kashmir, and **Ikat** with Odisha and Gujarat.
3. Traditional handloom cloth is woven by hand using a **loom**.
4. Handloom weaving provides employment and livelihood to many families.
5. Buying and appreciating such fabrics also helps keep traditional skills and designs alive.

8. Your teacher gives you five unknown cloth samples. Explain how you would observe and compare them before suggesting what they are made of.

Answer:

1. I would touch each cloth and record whether it feels **smooth or rough**.
2. I would observe whether each sample is **thick or thin**.
3. I would check whether each cloth looks **shiny or non-shiny**.
4. I would also observe whether the material is **stretchy or non-stretchy**.
5. Using these observations and information from the chapter, I would suggest whether each sample may be cotton, wool, silk, jute, polyester or nylon.

9. Your school wants to conduct an exhibition based on this chapter. How would you organize it?

Answer:

1. I would display the **woven mats, stitched cloth pieces and leaf cutlery** prepared by students.
2. Each item would be given a clear name tag.
3. Students would add short notes explaining how each item was made.
4. Different products could be arranged in separate sections so visitors can observe the various techniques.
5. Classmates and parents could then be invited to visit the exhibition and learn about weaving, stitching and reuse.

10. Your school wants to promote eco-friendly clothing practices. Using ideas from the chapter, suggest five actions.

Answer:

1. The school can encourage students to **reuse old clothes** instead of throwing them away.
2. Usable clothes can be passed on to people who need them.
3. Leftover cloth pieces can be stitched into useful articles such as mats, coasters and cleaning cloths.
4. Students can learn about **Kala cotton**, which grows without chemicals or extra water and is used to make eco-friendly fabric.
5. The school can also create awareness about **handloom weaving**, which the chapter describes as eco-friendly and sustainable because it uses no electricity.

8.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. A student observes two sets of threads crossing each other repeatedly at right angles. Which process has most likely been used?

- A) Spinning
- B) Weaving
- C) Dyeing
- D) Recycling

Answer: B) Weaving

2. Which sequence correctly represents the conversion of cotton into cloth?

- A) Cotton → Weaving → Fibre → Thread
- B) Cotton fibre → Spinning → Thread → Weaving → Cloth
- C) Cotton → Thread → Spinning → Cloth
- D) Cotton fibre → Weaving → Spinning → Cloth

Answer: B) Cotton fibre → Spinning → Thread → Weaving → Cloth

3. The nest-building method of the baya weaverbird is most similar to making a:

- A) Clay pot
- B) Woven basket
- C) Wooden chair
- D) Paper boat

Answer: B) Woven basket

4. Why are the grass strands in a baya weaverbird's nest passed over and under one another?

- A) To change their colour
- B) To make them softer
- C) To make the nest strong
- D) To make them longer

Answer: C) To make the nest strong

5. Which group contains only natural fibres mentioned in the chapter?

- A) Cotton, wool, nylon
- B) Polyester, silk, rayon
- C) Cotton, wool, silk
- D) Rayon, nylon, terylene

Answer: C) Cotton, wool, silk

6. Which group contains only synthetic fibres?

- A) Nylon, polyester, rayon
- B) Cotton, nylon, silk
- C) Wool, linen, polyester
- D) Bamboo, rayon, cotton

Answer: A) Nylon, polyester, rayon

7. Which of the following is correctly matched?

- A) Kanjeevaram — Kashmir
- B) Pashmina — Punjab
- C) Ikat — Odisha and Gujarat
- D) Phulkari — Tamil Nadu

Answer: C) Ikat — Odisha and Gujarat

8. Which statement about handloom fabric is correct?

- A) It is made only from synthetic fibres.
- B) It is traditionally woven by hand on a loom.
- C) It can be produced only in textile mills.



D) It is made without using threads.

Answer: B) It is traditionally woven by hand on a loom.

9. A cotton strand becomes stronger when it is twisted. Which process uses this principle?

- A) Embroidery
- B) Recycling
- C) Spinning
- D) Dyeing

Answer: C) Spinning

10. Which instrument performs a function similar to twisting cotton around the pencil in the chapter's activity?

- A) Loom
- B) Charkha
- C) Needle
- D) Scissors

Answer: B) Charkha

11. If a material is obtained from the cocoon of an insect, it is most likely:

- A) Linen
- B) Nylon
- C) Silk
- D) Cotton

Answer: C) Silk

12. Which is the correct sequence in the life cycle of the silk moth?

- A) Egg → Cocoon → Caterpillar → Moth
- B) Caterpillar → Egg → Moth → Cocoon
- C) Egg → Caterpillar → Cocoon → Adult moth
- D) Cocoon → Egg → Caterpillar → Adult moth

Answer: C) Egg → Caterpillar → Cocoon → Adult moth

13. Which pair represents similar actions performed by an animal and humans?

- A) Tailorbird stitching leaves — tailor stitching cloth
- B) Silkworm making cocoon — tailor weaving cloth
- C) Baya weaving nest — silkworm spinning cotton
- D) Tailorbird stitching leaves — textile mill spinning cotton

Answer: A) Tailorbird stitching leaves — tailor stitching cloth

14. What does a tailorbird mainly use to stitch the edges of leaves?

- A) Cotton cloth and wool
- B) Plant fibres or spider silk
- C) Nylon and polyester
- D) Bamboo strips and jute

Answer: B) Plant fibres or spider silk

15. A student repeatedly moves a needle up and down through cloth in a straight line. Which stitch is being made?

- A) Chikankari
- B) Running stitch
- C) Phulkari
- D) Bandhani

Answer: B) Running stitch

16. Which is the correct order for beginning a running stitch?

- A) Tie knot → Thread needle → Cut cloth
- B) Thread needle → Tie knot → Bring needle up from the back

C) Bring needle up → Thread needle → Tie knot

D) Fold cloth → Dye cloth → Thread needle

Answer: B) Thread needle → Tie knot → Bring needle up from the back

17. Which embroidery–state pair is NOT correctly matched?

A) Phulkari — Punjab

B) Toda — Tamil Nadu

C) Khneng — Meghalaya

D) Chikankari — Rajasthan

Answer: D) Chikankari — Rajasthan

18. Consider the following pairs:

1. Chikankari — Lucknow

2. Kantha — West Bengal, Odisha and Tripura

3. Phulkari — Punjab

4. Toda — Meghalaya

Which pairs are correctly matched?

A) 1 and 2 only

B) 1, 2 and 3 only

C) 2, 3 and 4 only

D) All four

Answer: B) 1, 2 and 3 only

19. Which traditional craft involves tying small parts of cloth before dyeing them to create dots, circles and patterns?

A) Bandhani

B) Pashmina

C) Ikat

D) Khadi

Answer: A) Bandhani

20. A child has several pieces of old cloth. Which option best demonstrates reuse as described in the chapter?

A) Throwing them into a dustbin

B) Burning them

C) Joining them to make a quilt

D) Leaving them unused

Answer: C) Joining them to make a quilt

21. Which statement about Kala cotton is correct?

A) It requires large quantities of extra water.

B) It grows only with chemical fertilisers.

C) It grows without chemicals or extra water.

D) It is a synthetic fibre.

Answer: C) It grows without chemicals or extra water.

22. Why is Kala cotton described as suitable for eco-friendly fabric?

A) It is made entirely from polyester.

B) It grows without chemicals or extra water and is hand-spun and woven.

C) It is produced only by large machines.

D) It is made from silk cocoons.

Answer: B) It grows without chemicals or extra water and is hand-spun and woven.

23. Which of the following shows the correct relationship?

A) Fibre : Spinning :: Thread : Weaving

B) Fibre : Weaving :: Cloth : Spinning

C) Thread : Cocoon :: Fibre : Loom

D) Loom : Spinning :: Charkha : Weaving

Answer: A) Fibre : Spinning :: Thread : Weaving

24. A student has thread but needs to produce fabric. Which tool/process combination is most appropriate according to the chapter?

- A) Charkha and spinning
- B) Loom and weaving
- C) Needle and spinning
- D) Cocoon and weaving

Answer: B) Loom and weaving

25. Which statement best distinguishes a charkha from a loom?

- A) A charkha makes thread, while a loom is used to weave cloth.
- B) A charkha weaves cloth, while a loom produces silk.
- C) Both are used only for embroidery.
- D) Both are used to obtain silk from cocoons.

Answer: A) A charkha makes thread, while a loom is used to weave cloth.

26. If one thread breaks in a woven mat, what is the most reasonable consequence?

- A) The mat automatically becomes thicker.
- B) The nearby structure may begin to loosen.
- C) All threads turn into fibres.
- D) The mat becomes synthetic.

Answer: B) The nearby structure may begin to loosen.

27. Which feature would be LEAST useful in the chapter's activity for examining an unknown cloth sample?

- A) Smooth or rough
- B) Thick or thin
- C) Shiny or not shiny
- D) Taste of the cloth

Answer: D) Taste of the cloth

28. Students are given cotton, wool, silk, jute, polyester and nylon samples. Which set of properties does the chapter suggest observing?

- A) Smell, taste and sound
- B) Smoothness, thickness, shininess and stretchiness
- C) Weight, boiling point and melting point
- D) Length, temperature and acidity

Answer: B) Smoothness, thickness, shininess and stretchiness

29. Which combination best represents sustainable practices highlighted in the chapter?

- A) Throwing away clothes + machine production
- B) Reusing clothes + handloom weaving
- C) Burning old cloth + synthetic fibres
- D) Discarding scraps + buying new clothes

Answer: B) Reusing clothes + handloom weaving

30. Which statement provides the best overall connection among the major ideas of the chapter?

- A) Fibres can be made into threads, threads can be woven into cloth, and cloth can be stitched and reused.
- B) Fibres are always synthetic and cannot be woven.
- C) Cloth is produced directly from cocoons without threads.
- D) Weaving, spinning and stitching are exactly the same process.

Answer: A) Fibres can be made into threads, threads can be woven into cloth, and cloth can be stitched and reused.

8.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities in Teaching:

- (1) **Learning by Doing – Weaving Activity:** Provide students with coloured paper strips, ribbons, strings or other suitable materials and let them practise the **over-under weaving pattern** to create a small mat. This directly reinforces the weaving activity given in the chapter.
- (2) **Observe Real Fabric Closely:** Ask students to examine shirts, handkerchiefs or other pieces of cloth using a **magnifying glass or camera zoom**. Let them identify and sketch the criss-cross arrangement of threads they observe.
- (3) **Fibre-to-Fabric Demonstration:** Demonstrate the sequence **cotton fibre → spinning → yarn/thread → weaving → cloth** using a small ball of cotton. Allow students to twist cotton fibres themselves so they can observe how twisting makes the strand stronger.
- (4) **Natural vs. Synthetic Fibre Classification:** Ask students to examine everyday clothes, bags or other articles and classify their materials as **natural or synthetic fibres**. Students can record the item, fibre category and one property they like about the material, following the chapter activity.
- (5) **Experiential Learning through a Weaver/Textile Visit:** Arrange a visit to a **handloom weaving centre or textile mill**, or invite a local handloom weaver to school. Students can observe the tools, processes and skills involved and prepare a short observation report. This is specifically suggested in the chapter's teacher note.
- (6) **Safe Stitching Practice:** Teach students the **basic running stitch** using small pieces of waste or old cloth. Demonstrate each step slowly and ensure close supervision, emphasizing that needles must be handled carefully and never used for play.
- (7) **Connect Nature with Human Skills:** Compare the **baya weaverbird's weaving** with human weaving and the **tailorbird's stitching** with human tailoring. This nature-to-life connection can make the concepts of weaving and stitching easier to remember.
- (8) **Indian Heritage Integration:** Use pictures, fabric samples or a classroom map of India to introduce traditional handlooms and embroideries such as **Kanjeevaram, Pashmina, Ikat, Chikankari, Kantha, Phulkari, Toda and Khneng**. Students can locate their places of origin on the map, integrating **Science/EVS with Art and Geography**.
- (9) **Reuse and Sustainability Project:** Ask students to bring safe leftover cloth pieces and convert them into **mats, coasters, cleaning cloths or other useful objects** using simple stitching. Discuss why reusing old clothes is preferable to immediately throwing them away.
- (10) **Student Exhibition and Peer Learning:** Conclude the chapter with a classroom exhibition displaying students' **woven mats, stitched cloth pieces and leaf cutlery**. Students can attach name tags and short notes explaining how each item was made, then explain their work to classmates or parents.

8.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

- (1) **Mini Classroom Loom:** Create a simple loom using cardboard, ice-cream sticks or a recycled box. Students can use coloured yarn to experiment with the **over-under pattern** and create their own miniature woven fabric, extending the chapter's paper-weaving activity.

- (2) **Digital Fabric Detective:** Let students use a tablet/mobile camera's **zoom function** to photograph different fabrics and compare their criss-cross thread patterns. They can create a digital “Fabric Detective Album” with pictures and observations such as smooth/rough, thick/thin, shiny/not shiny and stretchy/not stretchy.
- (3) **Fibre-to-Fabric Learning Station:** Set up stations labelled **Fibre → Spinning → Yarn → Weaving → Fabric**. Students move cotton or sample materials through each station and perform a small task, such as twisting cotton into a strand or weaving yarn, turning the manufacturing sequence into an interactive learning game.
- (4) **“Nature's Designers” Challenge:** Show or provide pictures of the **baya weaverbird and tailorbird** and challenge groups to identify which human skills their nest-building resembles. Students can then design a model nest using paper strips, leaves or fibres, connecting nature, observation and engineering thinking.
- (5) **Virtual Handloom Heritage Map:** Create an interactive map of India where students place picture cards or digital markers for **Kanjeevaram, Pashmina, Ikat, Chikankari, Kantha, Phulkari, Toda and Khneng embroidery**. Clicking or selecting a location can reveal the textile tradition associated with that region.
- (6) **Silkworm Life-Cycle Animation:** Students can create a simple flipbook, stop-motion presentation or digital animation showing **egg → caterpillar → cocoon → adult moth → eggs again**. This converts the chapter's life-cycle sequence into a visual storytelling activity.
- (7) **Upcycling Design Challenge:** Give groups clean leftover fabric pieces and challenge them to design a useful product such as a **coaster, mat, cleaning cloth or decorative patchwork item**. Students should explain how their creation reduces the need to discard old cloth.
- (8) **Young Textile Scientist Lab:** Provide labelled or teacher-selected fabric samples and ask students to investigate them using the chapter's criteria—**smooth/rough, thick/thin, shiny/not shiny and stretchy/not stretchy**. Groups can record observations and predict what each cloth may be made from before checking the answer.
- (9) **QR-Code Textile Exhibition:** After students prepare woven mats, stitched pieces and other chapter-based crafts, create QR codes linked to short student-recorded explanations of **how each item was made**. This modernizes the exhibition activity suggested in the chapter while encouraging communication and digital skills.
- (10) **“From Waste to Wonder” Innovation Fair:** Organize a class competition in which students transform old fabric into a new useful object and present the idea using three headings: **Material Used – How I Made It – How It Helps the Environment**. This integrates the chapter's ideas of stitching, reuse and sustainability with creativity and problem-solving.

8.17: Practicing Questions/Question Bank

A. Fill in the Blanks:

1. The process of crossing threads over and under each other is called _____.
Answer: Weaving
2. Traditional weaving is done on an instrument called a _____.
Answer: Loom
3. The process of twisting fibres together to make yarn is called _____.
Answer: Spinning

4. A _____ is used to spin cotton into thread.
Answer: Charkha
5. Thin, hair-like strands used to make thread are called _____.
Answer: Fibres
6. Cloth associated with spinning and self-sufficiency during the freedom struggle is called _____.
Answer: Khadi
7. Silk is obtained from the _____ of the silk moth.
Answer: Cocoon
8. Nylon and polyester are _____ fibres.
Answer: Synthetic
9. The _____ stitches leaves together to make its nest.
Answer: Tailorbird
10. The basic up-and-down stitch described in the chapter is called the _____ stitch.
Answer: Running
11. Phulkari embroidery originated in _____.
Answer: Punjab
12. Old pieces of cloth can be joined together to make beautiful _____.
Answer: Quilts

B. One-Mark Descriptive Questions:

1. **What is weaving?**
Answer: Weaving is the process of crossing strips or threads over and under one another to form a patterned fabric.
2. **What is spinning?**
Answer: Spinning is the process of twisting fibres together to make thread or yarn.
3. **What is a fibre?**
Answer: A fibre is a thin, hair-like strand that can be used to make thread.
4. **What is handloom fabric?**
Answer: Cloth traditionally woven by hand on a loom is called handloom fabric.
5. **Name two natural fibres.**
Answer: Cotton and wool are two natural fibres.
6. **Name two synthetic fibres.**
Answer: Nylon and polyester are two synthetic fibres.
7. **From where do we obtain silk?**
Answer: Silk is obtained from the cocoon of the silk moth.
8. **Which bird stitches leaves to make its nest?**
Answer: The tailorbird stitches leaves to make its nest.
9. **What is a running stitch?**
Answer: A running stitch is made by moving a needle repeatedly up and down through cloth in a straight line.

10. Why should old clothes not be thrown away?

Answer: Old clothes can be passed on or reused to make other useful articles.

C. Two-Mark Descriptive Questions:**1. How does the baya weaverbird make its nest?**

Answer:

1. The male baya weaverbird makes a hanging nest from strands of grass.
2. It weaves the strands over and under one another to make the nest strong.

2. Differentiate between natural and synthetic fibres.

Answer:

1. Natural fibres come from natural sources, such as cotton, wool and silk.
2. Synthetic fibres are made by humans using artificial materials, such as nylon and polyester.

3. What is spinning? Name an instrument used for spinning.

Answer:

1. Spinning is the process of twisting fibres together to form thread or yarn.
2. A charkha or spinning wheel can be used for spinning cotton.

4. How is silk obtained?

Answer:

1. Silk is obtained from the cocoon of the silk moth.
2. Cocoons are placed in hot water and the silk thread is gently pulled out.

5. How does a tailorbird stitch its nest?

Answer:

1. The tailorbird makes holes along the edges of a large leaf with its beak.
2. It uses plant fibres or spider silk to stitch the leaf edges together.

6. Give two ways of reusing old clothes.

Answer:

1. Usable clothes can be given to younger siblings or other people.
2. Old cloth pieces can be used to make new articles such as quilts.

D. Three-Mark Descriptive Questions:**1. Explain how cotton is converted into cloth.**

Answer:

1. Cotton contains thin strands called fibres.
2. The fibres are twisted together by spinning to form thread or yarn.
3. The threads are then woven over and under one another to make cloth.

2. Explain the importance of handloom weaving in India.

Answer:

1. Handloom weaving provides work and livelihood to many families.
2. It preserves traditional skills and designs.
3. Traditions such as Kanjeevaram, Pashmina and Ikat represent India's rich weaving heritage.

3. Describe the life cycle of the silk moth.

Answer:

1. A silk moth lays eggs, which hatch into caterpillars.
2. The caterpillars eat mulberry leaves, grow and spin cocoons around themselves.
3. Adult moths emerge from the cocoons and later lay eggs to begin the cycle again.

4. Explain how a running stitch is made.

Answer:

1. Thread a needle, tie a knot at one end and bring the needle up from the back of the cloth.
2. Push it down and bring it up again a short distance away.
3. Continue the up-down movement in a straight line to form a running stitch.

5. How can leftover cloth pieces be reused?

Answer:

1. Leftover cloth pieces can be arranged with their edges slightly overlapping.
2. They can be joined using a needle, thread and running stitches.
3. The joined pieces can become mats, coasters, tablecloths or cleaning cloths.

E. Five-Mark Descriptive Questions:**1. Explain the complete journey from cotton fibre to cloth.**

Answer:

1. Cotton contains thin, hair-like fibres.
2. The fibres are pulled into strands and twisted together.
3. This process is called spinning and produces thread or yarn.
4. Threads are arranged vertically and horizontally and crossed over and under one another.
5. This weaving process produces cloth or fabric.

2. Explain natural and synthetic fibres with examples.

Answer:

1. Fibres can be classified as natural or synthetic according to their source.
2. Natural fibres come from natural sources.
3. Cotton, bamboo, linen, wool and silk are examples of natural fibres mentioned in the chapter.
4. Synthetic fibres are made by humans using artificial materials.
5. Rayon, nylon, polyester and terylene are examples of synthetic fibres.

3. Compare the nest-making skills of the baya weaverbird and the tailorbird.**Answer:**

1. The baya weaverbird uses grass to build a hanging nest.
2. It weaves grass strands over and under one another.
3. The tailorbird uses a large leaf to make its nest.
4. It makes holes and uses plant fibres or spider silk to stitch the leaf edges together.
5. Thus, the baya demonstrates a weaving-like method, while the tailorbird demonstrates a stitching-like method.

4. Explain why old clothes should be reused rather than immediately thrown away.**Answer:**

1. Clothes that no longer fit may still be useful to other people.
2. They can be passed on to younger siblings or someone who can use them.
3. Old clothes can also be converted into other useful articles.
4. Small cloth pieces can be joined together to make quilts.
5. Reusing clothes therefore gives existing materials another useful purpose.

5. Describe the importance of weaving as a craft and livelihood in India.**Answer:**

1. India has a tradition of weaving going back about 4,000 years.
2. Traditional weaving is carried out by hand using a loom.
3. India has regional traditions such as Kanjeevaram, Pashmina and Ikat.
4. Weaving provides work to many families and supports their livelihoods.
5. It also keeps India's traditional skills, patterns and designs alive.

5th Standard World Around Us Book Chapter 9

Chapter 9: Rhythms of Nature

9.1 Summary of the Chapter:

Chapter 9: Rhythms of Nature — Summary:

- (1) **Change is a natural part of life.** We, our surroundings, plants, animals, and places keep changing over time. Some changes happen within minutes, while others may take days, months, or years.
- (2) **Day and night are repeating changes in nature.** Day changes into night and night into day because the **Earth rotates**. The side of Earth facing the Sun experiences day, while the side away from the Sun experiences night.
- (3) **A globe is a model of the Earth.** About three-fourths of Earth is covered by seas and oceans, while the remaining part consists of land masses where countries are located.
- (4) Nature also changes gradually **throughout the year**. We can observe these changes in **plants, birds and animals, air, heat and light, water bodies, and human activities**.
- (5) Changes in nature that occur in a **repeating yearly pattern** are called **seasons**. Weather becomes warmer, hotter, rainy, cooler, and then warmer again, forming a natural rhythm.
- (6) India traditionally experiences **six seasons: Vasanta (Spring), Grishma (Summer), Varsha (Monsoon), Sharad (Autumn), Hemant (Pre-winter), and Shishir (Winter)**.
- (7) **Seasons are not the same everywhere.** For example, winter in Kerala differs from winter in Kashmir, and the monsoon in Assam differs from that in Rajasthan.
- (8) **Plants, animals, and farming activities are closely connected with seasons.** Farmers grow different crops according to temperature and rainfall; some crops grow well in winter, some in summer, and others require the rainy season.
- (9) **Festivals and culture are linked with seasonal changes.** Festivals such as Pongal, Makar Sankranti, Holi, Diwali, Baisakhi, Gudi Padwa, Vishu, and Rongali Bihu are associated with particular seasons, harvests, and natural cycles.
- (10) **Seasons give rhythm to our lives.** They influence how plants grow, how animals live, the food people eat, the clothes they wear, their activities, crops, and festivals. Understanding seasons helps us understand that **change is natural and life moves in cycles**.

9.2 Important Formulas:

Important Formulas – Chapter 9: Rhythms of Nature:

The Chapter 9 is mainly **conceptual and observation-based**. It does **not introduce any specific mathematical or scientific formulas** for solving quantitative problems. The chapter focuses on changes in nature, day and night, Earth's rotation, seasonal patterns, and their effects on plants, animals and human activities.

Formula List:

No prescribed formulas are given in this chapter.

However, students should remember these important **numerical relationships/facts**:

Concept	Important Relationship / Fact
Earth's rotation	1 complete rotation $\approx$ 24 hours = 1 day
Day-night cycle	1 day = 24 hours
Year	1 year = 12 months
Seasons in India	6 seasons – Vasanta, Grishma, Varsha, Sharad, Hemant and Shishir

Concept	Important Relationship / Fact
Earth covered by seas and oceans	About 3/4 of Earth's surface
Approximate land portion	About 1/4 of Earth's surface (derived from the chapter's 3/4 water statement)
Seasonal observation periods used in the chapter	April–June, July–September, October–December, January–March

9.3 Fill-Up the Blank LOTS type questions with Answers: (30 Questions)

Fill in the Blanks – LOTS Type:

- Changes are happening to us and to the world around us all the _____.
Answer: time
- We grow _____ each year.
Answer: taller
- Leaves fall off trees and _____ again.
Answer: grow
- The day changes into _____.
Answer: night
- The night changes into _____.
Answer: day
- The Sun appears to rise in the _____.
Answer: east
- The Sun appears to set in the _____.
Answer: west
- The Earth _____ to cause the change between day and night.
Answer: rotates
- The side of the Earth receiving sunlight experiences _____.
Answer: day
- The side of the Earth receiving no sunlight experiences _____.
Answer: night
- A _____ is a model that represents our Earth.
Answer: globe
- Seas and oceans cover about _____ of the Earth.
Answer: three-fourths
- _____ are vast and open water bodies.
Answer: Oceans
- Seas are usually _____ than oceans.
Answer: smaller
- Changes in nature that follow a repeating pattern every year are called _____.
Answer: seasons
- India experiences _____ seasons based on changes in nature.
Answer: six
- Vasanta** is also called _____.
Answer: Spring
- Grishma** is also called _____.
Answer: Summer
- Varsha** is also called _____.
Answer: Monsoon
- Sharad** is also called _____.
Answer: Autumn

21. **Hemant** is also called _____.
Answer: Pre-winter
22. **Shishir** is also called _____.
Answer: Winter
23. Farmers grow different _____ in different seasons.
Answer: crops
24. Some crops are planted during the rainy season because they need more _____.
Answer: water
25. Seasons help us understand how _____ grow and animals live.
Answer: plants
26. Seasons influence the food we eat and the _____ we wear.
Answer: clothes
27. Many of our _____ are connected with seasons.
Answer: festivals
28. Seasons give _____ to our lives.
Answer: rhythm
29. Understanding seasons helps us understand how life moves in _____.
Answer: cycles
30. Every season brings something _____ and has its own magic.
Answer: special

9.4 Fill-Up the Blank HOTS type questions with Answers: (30 Questions)

Fill in the Blanks with Answers – HOTS Type:

1. If one part of the Earth is facing the Sun, that part experiences _____, while the opposite part experiences night.
Answer: day
2. If the Earth did not rotate, the regular change between _____ and _____ would not occur in the way we observe it.
Answer: day; night
3. In the torch-and-globe activity, rotating the globe instead of moving the torch demonstrates that the _____ rotates.
Answer: Earth
4. If it is daytime in India, some countries on the side of Earth away from the Sun will experience _____.
Answer: night
5. A student who wants to represent the Earth during a classroom activity should use a _____.
Answer: globe
6. If a water body is very large and open rather than partly enclosed by land, it is more likely to be an _____.
Answer: ocean
7. If the same natural changes occur in a repeating pattern year after year, we call these patterns _____.
Answer: seasons
8. If the weather becomes hot, then rainy, then cooler and repeats this pattern the next year, it demonstrates nature's _____.
Answer: rhythm
9. To study how leaves, flowers and fruits change throughout the year, students should observe _____ life.
Answer: plant

10. To study changes in ponds, puddles and rainfall throughout the year, students should observe _____ and water bodies.
Answer: water
11. If students record seasonal observations regularly, a _____ can help them compare changes over time.
Answer: journal
12. To compare observations from April–June with those from July–September, students can prepare a seasons’ _____.
Answer: chart
13. If farmers choose crops according to temperature and rainfall, their farming activities are influenced by the _____.
Answer: seasons
14. A crop requiring plenty of water is more suitable for planting during the _____ season.
Answer: rainy
15. If two regions receive different amounts of rainfall, their experience of the _____ may also be different.
Answer: monsoon
16. Winter in Kerala and winter in Kashmir are different, showing that the same _____ can vary from one region to another.
Answer: season
17. If ants are seen carrying their eggs to higher ground, it can be considered a natural sign that _____ may be coming soon.
Answer: rain
18. If the koel begins to sing in Odisha, farmers traditionally take it as an indication that the _____ are approaching.
Answer: rains
19. The connection of festivals with harvests and seasonal changes shows that human _____ is closely linked with nature.
Answer: life
20. If a farmer grows one crop in summer and another in winter, this demonstrates that different crops are suited to different _____.
Answer: seasons
21. The changes in plants, animals, water and human activities throughout the year show that different parts of nature are _____.
Answer: connected
22. If people change the clothes they wear when the weather changes, their clothing choices are influenced by the _____.
Answer: seasons
23. If plants flower, crops are harvested and festivals are celebrated at particular times of the year, these activities demonstrate the _____ of seasonal life.
Answer: rhythm
24. The repeated sequence of seasonal changes teaches us that change in nature is both natural and _____.
Answer: necessary
25. By observing seasons year after year, we understand that life moves in _____.
Answer: cycles
26. If students compare food, clothing, festivals and nature during different seasons, they can identify seasonal _____.
Answer: differences

27. A student studying changes in birds, plants and rainfall should make observations during different _____ of the year.

Answer: time periods

28. If a pond has more water during some months and less during others, this is an example of a _____ change.

Answer: seasonal

29. If the same seasonal pattern occurred last year and occurs again next year, it is a _____ pattern.

Answer: repeating

30. Understanding how seasons affect plants, animals, crops, food, clothing and festivals helps us understand the close connection between _____ and human life.

Answer: nature

9.5 One-mark questions with Answers of LOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers – LOTS Type:

1. **What happens to us and the world around us over time?**
Answer: We and the world around us keep changing over time.
2. **Name one change that happens to children as they grow.**
Answer: Children grow taller as they grow older.
3. **What happens to leaves on trees over time?**
Answer: Leaves fall off trees and grow again.
4. **What happens to flowers as part of their natural cycle?**
Answer: Flowers bloom, dry up and bloom again.
5. **What happens after day?**
Answer: Day changes into night.
6. **What happens after night?**
Answer: Night changes into day.
7. **In which direction does the Sun appear to rise?**
Answer: The Sun appears to rise in the east.
8. **In which direction does the Sun appear to set?**
Answer: The Sun appears to set in the west.
9. **What causes different parts of the Earth to face the Sun?**
Answer: The rotation of the Earth causes different parts of it to face the Sun.
10. **Which side of the Earth experiences day?**
Answer: The side of the Earth receiving sunlight experiences day.
11. **Which side of the Earth experiences night?**
Answer: The side of the Earth not receiving sunlight experiences night.
12. **What is a globe?**
Answer: A globe is a model that represents the Earth.
13. **What does the blue part of a globe represent?**
Answer: The blue part of a globe represents seas and oceans.
14. **How much of the Earth is covered by seas and oceans?**
Answer: Seas and oceans cover about three-fourths of the Earth.
15. **What is the main difference between a sea and an ocean?**
Answer: A sea is usually smaller and partly enclosed by land, while an ocean is a vast open water body.
16. **What is a season?**
Answer: A season is a repeating pattern of change in nature that occurs every year.
17. **How many seasons are experienced in India according to the chapter?**
Answer: India experiences six seasons.

18. What is Vasanta?

Answer: Vasanta is the spring season.

19. What is Grishma?

Answer: Grishma is the summer season.

20. What is Varsha?

Answer: Varsha is the monsoon season.

21. What is Sharad?

Answer: Sharad is the autumn season.

22. What is Hemant?

Answer: Hemant is the pre-winter season.

23. What is Shishir?

Answer: Shishir is the winter season.

24. Why are some crops planted during the rainy season?

Answer: Some crops are planted during the rainy season because they need more water to grow.

25. What do farmers grow in different seasons?

Answer: Farmers grow different crops in different seasons.

26. Name two festivals connected with seasons mentioned in the chapter.

Answer: Pongal and Makar Sankranti are two festivals connected with seasons.

27. Name any two New Year or harvest festivals mentioned in the chapter.

Answer: Baisakhi and Vishu are two New Year or harvest festivals mentioned in the chapter.

28. What do seasons help us understand about plants?

Answer: Seasons help us understand how plants grow.

29. What do seasons teach us about change?

Answer: Seasons teach us that change is natural and necessary.

30. What do we understand by studying the cycles of seasons?

Answer: By studying the seasons, we understand how life moves in cycles.

9.6 One-mark questions with Answers of HOTS Type: (30 Questions)**One-Mark Descriptive Questions with Answers – HOTS Type:****1. Why do we experience day and night?**

Answer: We experience day and night because the Earth rotates and different parts face the Sun at different times.

2. Why does the Sun appear to move across the sky even though the Earth is rotating?

Answer: The rotation of the Earth makes the Sun appear to move across the sky.

3. What would you observe when your part of the Earth turns away from the Sun?

Answer: We would observe night when our part of the Earth turns away from the Sun.

4. Why is only one side of a globe illuminated when a torch is shone on it?

Answer: Only the side facing the torch receives light, just as the side of Earth facing the Sun experiences day.

5. If it is daytime in India, why can it be night in some other countries?

Answer: It can be night elsewhere because different parts of the rotating Earth face the Sun at different times.

6. How can a globe help us understand the Earth better?

Answer: A globe helps us understand the distribution of land and water and how different parts of Earth face the Sun.

7. Why is an ocean different from a sea?

Answer: An ocean is vast and open, whereas a sea is usually smaller and partly enclosed by land.

8. Why is keeping a seasons' journal useful?

Answer: A seasons' journal helps us observe and compare changes in nature throughout the year.

9. How can a seasons' chart help students identify patterns in nature?

Answer: A seasons' chart allows students to compare observations made during different periods of the year.

10. Why should plants be observed during different months of the year?

Answer: Observing plants in different months helps us understand changes in their leaves, flowers and fruits.

11. How can observing ponds and puddles help us understand seasonal change?

Answer: Changes in the amount of water in ponds and puddles can indicate changes in rainfall across seasons.

12. Why are seasons described as a repeating pattern in nature?

Answer: Seasons are a repeating pattern because similar natural changes occur again year after year.

13. Why might winter in Kerala be different from winter in Kashmir?

Answer: Winter can differ between regions because seasonal conditions are not the same everywhere.

14. Why might the monsoon in Assam differ from the monsoon in Rajasthan?

Answer: The monsoon may differ because different regions experience seasonal changes differently.

15. Why do farmers not grow the same crops in every season?

Answer: Farmers grow different crops because different crops grow best under different seasonal conditions.

16. Why are some crops planted during the rainy season?

Answer: Some crops are planted during the rainy season because they require more water to grow.

17. What might farmers understand when they hear the koel singing in Odisha?

Answer: Farmers may understand that the rains are approaching and it is time to begin planting seeds.

18. What can we infer when ants carry their eggs to higher ground?

Answer: We can infer that rain may be coming soon.

19. Why do people's clothes change with the seasons?

Answer: People change their clothes to suit the changing seasonal conditions.

20. How do seasons influence people's food habits?

Answer: Different seasons influence the types of food people eat.

21. What does the connection between festivals and seasons show us?

Answer: It shows that human traditions and celebrations are closely connected with nature.

22. How are farming and seasonal cycles connected?

Answer: Farming depends on seasonal conditions because different crops require different amounts of heat and water.

23. Why is change necessary in nature?

Answer: Change is necessary because it allows the natural cycles of plants, animals and human activities to continue.

24. What can we conclude if similar seasonal changes occur every year?

Answer: We can conclude that seasonal changes follow a natural repeating rhythm.

25. How are plants, animals and human activities connected with seasons?

Answer: Their growth, behaviour and activities change according to seasonal conditions.

26. Why should we compare observations from different periods of the year?

Answer: Comparing observations helps us identify patterns of seasonal change.

27. What can you infer if a plant flowers only during certain months each year?

Answer: We can infer that the plant's flowering is connected with seasonal changes.

28. How do seasons demonstrate that life moves in cycles?

Answer: Seasons repeat their patterns year after year, showing that many changes in life occur in cycles.

29. Why can seasons be called the “rhythm of nature”?

Answer: Seasons can be called the rhythm of nature because their changes occur in repeating patterns over the year.

30. What important lesson can we learn by observing seasonal changes?

Answer: We learn that change is a natural and necessary part of life.

9.7 Two-mark questions with Answers of LOTS Type: (20 Questions)
Two-Mark Descriptive Questions with Answers – LOTS Type:
1. What are some changes that we notice around us?

Answer:

1. We grow taller, leaves fall and grow again, and flowers bloom and dry up.
2. The sky changes colour, and the Sun appears to rise and set every day.

2. What happens during the change from day to night?

Answer:

1. Day changes into night and night changes into day.
2. The Sun appears to rise in the east and set in the west.

3. How does the rotation of the Earth cause day and night?

Answer:

1. The side of the Earth facing the Sun experiences day.
2. The side that does not receive sunlight experiences night.

4. Explain the torch-and-globe activity used to demonstrate day and night.

Answer:

1. A torch is kept steady and its light is flashed on one side of a globe.
2. As the globe is rotated, different parts face the light, demonstrating day and night.

5. What is a globe? What do its blue parts represent?

Answer:

1. A globe is a ball-shaped model representing the Earth.
2. The blue parts of a globe represent seas and oceans.

6. Differentiate between seas and oceans.

Answer:

1. Seas are usually smaller and are partly enclosed by land.
2. Oceans are vast and open water bodies.

7. What are the main themes observed in a seasons' chart?

Answer:

1. Plant life, birds and animals, and air, heat and light are observed.
2. Water and water bodies and human activities are also observed.

8. What are the four time periods used in the seasons' chart?

Answer:

1. The first two periods are **April–June** and **July–September**.

2. The other two periods are **October–December** and **January–March**.

9. What do students study while tracking changes throughout the year?

Answer:

1. They study changes in plants, birds and animals, air, heat, light and water.
2. They also study changes in water bodies and human activities.

10. What are seasons?

Answer:

1. Nature changes gradually over the year as the weather becomes hot, rainy and cooler.
2. The repeating pattern of these natural changes every year is called **seasons**.

11. Name the six seasons experienced in India.

Answer:

1. **Vasanta (Spring), Grishma (Summer), and Varsha (Monsoon)** are three seasons.
2. **Sharad (Autumn), Hemant (Pre-winter), and Shishir (Winter)** are the other three.

12. How are crops related to seasons?

Answer:

1. Farmers grow different crops during different seasons.
2. Some crops grow best in winter or summer, while others are planted in the rainy season because they need more water.

13. Mention two natural signs connected with the arrival of rain given in the chapter.

Answer:

1. In Odisha, the singing of the koel tells farmers that the rains are coming.
2. Ants carrying their eggs to higher ground is also considered a natural sign of approaching rain.

14. Name any four festivals mentioned in the chapter that are connected with seasons.

Answer:

1. **Pongal, Makar Sankranti, Holi and Diwali** are festivals connected with seasons.
2. The chapter also mentions **Baisakhi, Gudi Padwa, Vishu and Rongali Bihu**.

15. How do seasons influence our lives?

Answer:

1. Seasons influence how plants grow, how animals live, and what people eat, wear and do.
2. They also influence crops and the festivals people celebrate.

16. What do seasons teach us about nature and life?

Answer:

1. Seasons remind us that change is natural and necessary.
2. They help us understand that life moves in cycles.

17. What changes in plants can be observed during different months?

Answer:

1. Students can observe changes in the leaves of plants.
2. They can also observe changes in flowers and fruits during different months.

18. How can students study seasonal changes through a journal and chart?

Answer:

1. Students can record their observations of nature regularly in a seasons' journal.
2. They can combine these observations in a chart to identify patterns of change throughout the year.

19. How are festivals connected with seasons?

Answer:

1. Many Indian festivals are celebrated during particular seasons of the year.
2. Some festivals are associated with the New Year, harvests or seasonal changes.

20. What observations can be made about water and water bodies during different seasons?

Answer:

1. Students can observe changes in rain, ponds and puddles during different months.
2. These observations help them understand changes in water throughout the year.

9.8. Two-mark questions with Answers of HOTS Type: (15 Questions)

Two-Mark Descriptive Questions with Answers – HOTS Type:

1. Why do different parts of the Earth experience day and night at different times?

Answer:

1. The Earth rotates, causing different parts of it to face the Sun at different times.
2. The part facing the Sun experiences day, while the part away from the sunlight experiences night.

2. If the Sun appears to move from east to west, what is actually happening? Explain.

Answer:

1. The Sun only appears to move across the sky from east to west.
2. The chapter explains that it is actually the Earth that rotates.

3. How can you use a torch and globe to prove that rotation causes day and night?

Answer:

1. Shine a stationary torch on a globe and observe that the illuminated side represents day while the dark side represents night.
2. Rotate the globe and observe how different parts move into and out of the light.

4. If it is daytime in India, why might some other countries be experiencing night?

Answer:

1. Only the part of the Earth facing the Sun receives sunlight at a particular time.
2. Countries on the side away from the Sun will therefore experience night.

5. A student says, “Nature remains the same throughout the year.” How would you correct the student?

Answer:

1. Plants, animals, air, heat, light, water and human activities change during different parts of the year.
2. These changes form observable patterns that repeat over time.

6. Why is maintaining a seasons' journal useful for understanding nature?

Answer:

1. A seasons' journal allows students to record changes in their surroundings throughout the year.
2. Comparing these observations helps them identify repeating patterns in nature.

7. How would observing leaves, flowers and fruits throughout the year help you understand seasons?

Answer:

1. Their appearance and condition can change during different months of the year.
2. Comparing these changes helps us recognize seasonal patterns in plant life.

8. Why are seasons called a “natural rhythm”?

Answer:

1. Nature changes from warmer to hotter, rainy and cooler conditions over the year.
2. As these changes repeat every year, they form a natural rhythm called seasons.

9. Why might winter in Kerala be different from winter in Kashmir Valley?

Answer:

1. Seasonal experiences can differ from one region to another.

2. Therefore, the same season may produce different conditions in Kerala and Kashmir Valley.

10. Why might the monsoon in Assam be different from that in Rajasthan?

Answer:

1. Different regions can experience the same season differently.
2. Hence, monsoon conditions in Assam may not be the same as those in Rajasthan.

11. Why do farmers select different crops for different seasons?

Answer:

1. Different crops grow best under different seasonal conditions.
2. Some grow best in winter or summer, while others need the extra water available during the rainy season.

12. A farmer in Odisha hears a koel singing. What might the farmer conclude and do?

Answer:

1. The farmer may understand the koel's song as a natural sign that the rains are approaching.
2. The farmer may then begin planting seeds, as described in the chapter.

13. What might you infer if you observe ants carrying their eggs to higher ground?

Answer:

1. You may infer that rain could be coming soon.
2. The chapter identifies this behaviour as a natural sign of approaching rain.

14. How does studying ponds and puddles throughout the year help us understand seasons?

Answer:

1. Their water levels and presence can change as rain changes during different months.
2. Comparing these observations helps us identify seasonal changes in water and water bodies.

15. How can seasons affect both nature and people's lives?

Answer:

1. Seasons affect plant growth, animal life and other natural changes.
2. They also influence what people eat, wear and do, as well as crops and festivals.

16. Why can festivals help us understand the connection between people and nature?

Answer:

1. Many festivals mentioned in the chapter are connected with particular seasons and harvests.
2. This shows that human celebrations and cultural activities are closely linked with seasonal changes.

17. If similar changes in weather occur again next year, what can you conclude?

Answer:

1. We can conclude that these changes follow a repeating pattern.
2. Such repeating natural patterns throughout the year are called seasons.

18. Why should students compare observations made in April–June with those made in July–September?

Answer:

1. Comparing the periods helps students notice changes in plants, animals, weather, water and human activities.
2. These comparisons help them identify patterns of seasonal change throughout the year.

19. If people wear different clothes and eat different foods during different seasons, what does this show?

Answer:

1. It shows that people's everyday lives change according to seasonal conditions.
2. Thus, seasons influence both what people eat and what they wear.

20. What lesson can we learn from the repeated cycle of seasons?

Answer:

1. The repeated seasons teach us that change is natural and necessary.
2. They also help us understand that life moves in cycles.

9.9. Three-mark questions with Answers of LOTS Type: (15 Questions)

Three-Mark Descriptive Questions with Answers – LOTS Type:

1. Explain three examples of changes that take place around us.

Answer:

1. Children grow taller as the years pass.
2. Leaves fall from trees and grow again, while flowers bloom and dry up.
3. The sky changes colour, and the Sun appears to rise and set every day.

2. Explain how day and night occur.

Answer:

1. The Earth rotates continuously.
2. The side of the Earth facing the Sun receives light and experiences day.
3. The side that does not receive sunlight experiences night.

3. Describe the torch-and-globe activity used to demonstrate day and night.

Answer:

1. Place a globe on a table and shine a torch on one side to represent sunlight.
2. The illuminated side represents day, while the side without light represents night.
3. Slowly rotate the globe to observe how different parts move into and out of the light.

4. Write three important facts about a globe, seas and oceans.

Answer:

1. A globe is a ball-shaped model representing the Earth.
2. Seas and oceans cover about three-fourths of the Earth.
3. Seas are usually smaller and partly enclosed by land, whereas oceans are vast and open water bodies.

5. What observations are included in the seasons' chart?

Answer:

1. Students observe **plant life** and **birds and animals**.
2. They observe **air, heat and light**, as well as **water and water bodies**.
3. They also observe changes in **human activities** throughout the year.

6. Explain how students can track changes in nature throughout the year.

Answer:

1. Students can record observations about their surroundings in a seasons' journal.
2. They can combine their observations in a classroom seasons' chart.
3. They can compare different time periods to identify patterns of change.

7. What are seasons? Explain how they form a natural rhythm.

Answer:

1. Nature changes gradually as the weather becomes warmer, hotter, rainy and then cooler.
2. Similar changes occur again during the following year.
3. This repeating pattern of changes in nature is called **seasons**.

8. Name and explain the six seasons experienced in India according to the chapter.

Answer:

1. **Vasanta** is Spring and **Grishma** is Summer.

2. **Varsha** is Monsoon and **Sharad** is Autumn.
3. **Hemant** is Pre-winter and **Shishir** is Winter.

9. Explain how seasons influence the crops grown by farmers.

Answer:

1. Farmers grow different crops during different seasons.
2. Some crops grow best in winter, while others grow best in the heat of summer.
3. Some crops are planted during the rainy season because they require more water.

10. Mention three ways in which seasons influence our lives.

Answer:

1. Seasons influence how plants grow and how animals live.
2. They affect what people eat, wear and do.
3. They also influence the crops people harvest and the festivals they celebrate.

11. Describe three natural signs related to seasonal changes mentioned in the chapter.

Answer:

1. In Odisha, the singing of the koel indicates to farmers that rains are approaching.
2. Ants carrying their eggs to higher ground is considered a natural sign that rain may come soon.
3. During the monsoon, snakes may come out of their flooded burrows.

12. How can students study plant life during different seasons?

Answer:

1. Students can observe plants during different months of the year.
2. They can record changes in leaves, flowers and fruits.
3. They can compare these observations to understand seasonal patterns in plant life.

13. Describe the four time periods used for recording seasonal observations in the chapter.

Answer:

1. The first period is **April–June** and the second is **July–September**.
2. The third period is **October–December**.
3. The fourth period is **January–March**.

14. Explain the connection between festivals and seasons.

Answer:

1. Many festivals in India are connected with particular seasons.
2. The chapter mentions festivals such as Pongal, Makar Sankranti, Holi, Diwali, Baisakhi, Gudi Padwa, Vishu and Rongali Bihu.
3. These festivals are associated with occasions such as harvests, New Year celebrations and seasonal changes.

15. What important lessons do seasons teach us about life?

Answer:

1. Every season brings something special and has its own importance.
2. Seasons remind us that change is natural and necessary.
3. They help us understand that life moves in cycles.

9.10. Three-mark questions with Answers of HOTS Type: (16 Questions)

Three-Mark Descriptive Questions with Answers – HOTS Type:

1. If the Sun appears to move across the sky, how can you explain what is actually happening?

Answer:

1. The Sun appears to rise in the east and move towards the west.
2. Actually, it is the **Earth that rotates**, making the Sun appear to move.

3. This rotation also causes different parts of the Earth to experience day and night.

2. How would you use a torch and globe to explain day and night to a friend?

Answer:

1. I would keep the torch steady as the Sun and shine it on one side of the globe.
2. The illuminated side would represent day, while the dark side would represent night.
3. By rotating the globe, I would show how different places move between day and night.

3. If it is daytime in India, why can some other countries have night at the same time?

Answer:

1. The Earth is ball-shaped and only the side facing the Sun receives sunlight.
2. India experiences day when its side is facing the Sun.
3. Countries on the side away from the sunlight can experience night at the same time.

4. A student says, "Nature looks the same throughout the year." How would you prove that this statement is incorrect?

Answer:

1. Plants may show changes in their leaves, flowers and fruits during different months.
2. Birds and animals, water bodies, air, heat, light and human activities also change during the year.
3. Recording these observations across different periods would show clear patterns of seasonal change.

5. Why is a seasons' journal more useful when maintained throughout the year rather than for only a few days?

Answer:

1. Seasonal changes take place gradually over different periods of the year.
2. A year-long journal allows observations about plants, animals, weather, water and human activities to be compared.
3. These comparisons help students identify repeating patterns in nature.

6. How would you prove that seasons form a repeating natural rhythm?

Answer:

1. We can observe that weather becomes warmer, hotter, rainy and then cooler during the year.
2. Similar changes occurred in previous years and can occur again in the following year.
3. Therefore, these repeating changes form the natural rhythm that we call **seasons**.

7. Why might farmers grow different crops during summer, winter and the rainy season?

Answer:

1. Different crops grow best under different seasonal conditions.
2. Some crops grow well in winter or in the heat of summer.
3. Crops needing more water can be planted during the rainy season.

8. A farmer in Odisha hears a koel singing. What might the farmer infer and why?

Answer:

1. The farmer may infer that the rains are approaching.
2. The chapter describes the koel's song as a natural indication used by farmers in Odisha.
3. The farmer may therefore prepare to begin planting seeds.

9. If you observe ants carrying their eggs to higher ground, what might you conclude? Explain.

Answer:

1. I might conclude that rain could be approaching soon.
2. Moving eggs to higher ground can help keep them away from water.

3. The chapter identifies this behaviour as a natural sign associated with approaching rain.

10. Why should we not expect winter in Kerala to be exactly like winter in Kashmir Valley?

Answer:

1. Seasonal experiences are different in different parts of India.
2. The chapter specifically points out that winter in Kerala differs from winter in Kashmir Valley.
3. This shows that the same season can have different characteristics in different regions.

11. How would comparing April–June with July–September help students understand seasonal changes?

Answer:

1. Students can compare plant life, birds and animals during the two periods.
2. They can also compare air, heat, light, water bodies and human activities.
3. The differences observed help them recognize patterns of change throughout the year.

12. How can changes in ponds and puddles be used to understand seasonal patterns?

Answer:

1. Students can observe ponds, puddles and rainfall during different months.
2. They can record how these water-related observations change throughout the year.
3. Comparing them helps identify seasonal patterns related to water and rainfall.

13. What can you infer from the connection between festivals, harvests and seasons?

Answer:

1. Many festivals are celebrated during particular seasons of the year.
2. Some celebrations are connected with harvests, New Year occasions and seasonal changes.
3. This shows that people's cultural activities are closely connected with the rhythms of nature.

14. Suppose the seasons suddenly stopped changing. Which three areas of life discussed in the chapter could be affected?

Answer:

1. Plant growth and animal life could be affected because they change with seasons.
2. Farming could be affected because different crops are grown under different seasonal conditions.
3. People's food, clothing, activities and seasonal celebrations could also be affected.

15. How do seasons show that nature and human life are interconnected?

Answer:

1. Seasons influence the growth of plants and the lives of animals.
2. They influence crops and what people eat, wear and do.
3. They also influence festivals, showing that human life follows nature's seasonal rhythm.

16. Why can seasonal change be considered both natural and necessary?

Answer:

1. Seasonal changes occur repeatedly as part of nature's yearly rhythm.
2. They influence plants, animals, crops and many human activities.
3. Their repeating pattern shows how life continues through natural cycles.

9.11 Five-mark questions with Answers of LOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – LOTS Type:

1. Explain how day and night occur.

Answer:

1. The Earth rotates continuously.
2. The side of the Earth facing the Sun receives sunlight and experiences **day**.
3. The side that does not receive sunlight experiences **night**.
4. As the Earth rotates, different parts of it come into and move away from sunlight.
5. Thus, the rotation of the Earth causes the regular change between day and night.

2. Describe the torch-and-globe activity used to demonstrate day and night.**Answer:**

1. Place a globe on a table and shine a torch on one side of it.
2. The torchlight represents the **Sun**, while the globe represents the **Earth**.
3. The side receiving the torchlight represents day, while the side without light represents night.
4. Keep the torch steady and slowly rotate the globe.
5. We can observe different parts of the globe moving into and out of the light as it rotates.

3. Explain how students can prepare and use a seasons' chart.**Answer:**

1. Students prepare a large wall-sized chart using observations recorded in their journals.
2. The chart is divided into **April–June, July–September, October–December and January–March**.
3. They record observations about plant life, birds and animals, air, heat and light, water and water bodies, and human activities.
4. Students discuss their observations and write the main points in the appropriate boxes.
5. They then compare the observations to understand patterns of change throughout the year.

4. Explain what seasons are and name the six seasons experienced in India.**Answer:**

1. Nature changes gradually throughout the year as the weather becomes warmer, hotter, rainy and cooler.
2. These changes occur in a repeating natural pattern called **seasons**.
3. **Vasanta (Spring)** and **Grishma (Summer)** are two of India's six seasons.
4. **Varsha (Monsoon)** and **Sharad (Autumn)** are the next two seasons.
5. **Hemant (Pre-winter)** and **Shishir (Winter)** complete the six seasons.

5. Explain how seasons influence plants, animals and human life.**Answer:**

1. Seasons influence how **plants grow** throughout the year.
2. They also affect how **animals live and behave**.
3. Seasons influence the **food people eat** and the **clothes they wear**.
4. Farmers grow and harvest different **crops** according to seasonal conditions.
5. Many of our **festivals and human activities** are also connected with seasons.

6. Explain the relationship between farming and seasons.**Answer:**

1. Farmers grow different crops during different seasons.
2. Some crops grow best during **winter**.
3. Some crops grow well in the **heat of summer**.
4. Some crops are planted during the **rainy season** because they need more water.
5. Thus, seasonal changes influence the choice and growth of crops.

7. Describe how students can study changes in nature throughout a year.**Answer:**

1. Students can regularly observe plants, animals, sunlight, water and human activities.
2. They can record these observations in a **seasons' journal**.

3. Their observations can then be combined in a classroom seasons' chart.
4. Groups can study changes in plant life, birds and animals, air, heat and light, water bodies, and human activities.
5. They can create posters and present how each theme changes during different periods of the year.

8. Explain how festivals are connected with seasons in India.

Answer:

1. Many festivals in India are connected with particular seasons.
2. **Pongal and Makar Sankranti** are among the seasonal festivals mentioned in the chapter.
3. **Holi and Diwali** are also linked with particular seasonal occasions.
4. **Baisakhi, Gudi Padwa, Vishu and Rongali Bihu** are also included in the chapter's seasonal festival activity.
5. These examples show that festivals, harvests and seasonal changes are closely connected.

9. Write five important facts about the Earth, seas and oceans given in the chapter.

Answer:

1. A **globe** is a model that represents the Earth.
2. A globe is shaped like a ball, similar to the real Earth.
3. Seas and oceans cover about **three-fourths of the Earth**.
4. Seas are usually smaller than oceans and are partly enclosed by land.
5. Oceans are vast and open water bodies, while the remaining parts of Earth are land masses.

10. Explain why seasons are important in our lives.

Answer:

1. Every season brings something special and has its own importance.
2. Seasons shape how plants grow and how animals live.
3. They influence what people eat, wear and do.
4. They affect the crops we harvest and the festivals we celebrate.
5. Seasons remind us that **change is natural and necessary and that life moves in cycles**.

9.12 Five-mark questions with Answers of HOTS Type: (7 Questions)

Five-Mark Descriptive Questions with Answers – HOTS Type:

1. How would you explain to a younger student that day and night are caused by the Earth's rotation and not by the Sun moving around the Earth?

Answer:

1. The Sun appears to rise in the east, move across the sky and set in the west.
2. However, the chapter explains that it is actually the **Earth that rotates**.
3. The part of the Earth facing the Sun receives light and experiences day.
4. The part facing away from the Sun does not receive light and experiences night.
5. A torch and rotating globe can be used to demonstrate this change clearly.

2. A student observes the same tree during April, August, November and February. How can these observations help the student understand seasons?

Answer:

1. The student can observe changes in the tree's leaves, flowers and fruits at different times.
2. These observations can be recorded in a seasons' journal.
3. Comparing observations from different months can reveal patterns in plant life.
4. Similar observations made year after year can show that certain changes repeat.

5. Such repeating changes help the student understand the natural rhythm called **seasons**.

3. Suppose two children living in Kerala and Kashmir compare their winter experiences. Why might their observations be different?

Answer:

1. The chapter points out that winter in Kerala is different from winter in Kashmir Valley.
2. Therefore, children in these two regions may observe different seasonal conditions.
3. Their observations of plants, air, heat, water and human activities may also differ.
4. Comparing their experiences helps them understand that seasons are experienced differently in different regions.
5. Thus, studying local observations helps us appreciate the diversity of seasonal patterns.

4. A farmer has crops that need plenty of water. Which seasonal conditions would be useful, and why?

Answer:

1. The farmer should consider planting such crops during the **rainy season**.
2. The chapter states that some crops are planted during this season because they need more water.
3. Other crops may grow better in winter or in the heat of summer.
4. This shows that different crops have different seasonal requirements.
5. Therefore, understanding seasonal changes helps farmers decide when particular crops can be grown.

5. How would you use the behaviour of birds and insects mentioned in the chapter to explain that people can learn by observing nature?

Answer:

1. In Odisha, farmers observe the singing of the **koel** as a sign that rains are approaching.
2. This natural sign helps them know when to start planting seeds.
3. The chapter also mentions ants carrying their eggs to higher ground as a sign of approaching rain.
4. Such observations show that changes in animal behaviour can be associated with seasonal changes.
5. Therefore, careful observation of nature can help people understand changes happening around them.

6. How would you prove through classroom observations that seasons affect many parts of nature at the same time?

Answer:

1. I would divide the class into groups to observe plant life, birds and animals, air, heat and light, water bodies, and human activities.
2. Each group would record its observations during different periods of the year.
3. We would combine all the observations in a common seasons' chart.
4. Comparing the chart would reveal how several aspects of nature change during the same periods.
5. This would demonstrate that seasonal changes influence many interconnected parts of our surroundings.

7. "Seasons are not just changes in weather." Justify this statement using the chapter.

Answer:

1. Seasons influence how **plants grow** throughout the year.
2. They also influence how **animals live**.
3. Seasons affect the **food people eat, clothes they wear and activities they perform**.
4. They influence the crops people harvest and the festivals they celebrate.
5. Therefore, seasons shape both nature and human life rather than merely changing the weather.

8. Imagine that you compare your seasons' journal with one prepared by your grandparents when they were children. What could you learn from the comparison?

Answer:

1. You could compare the seasonal patterns recorded at two different times.
2. You could identify whether the timing or nature of seasonal changes appears similar or different.
3. You could discuss any major differences noticed between the two sets of observations.
4. You could think about possible reasons for the differences instead of considering seasons completely unchanging.
5. Such a comparison would help you reflect more deeply on patterns and changes in seasons over time.

9. How do festivals and farming activities show the connection between nature and human culture?

Answer:

1. Farmers grow different crops according to different seasonal conditions.
2. Some crops require winter or summer conditions, while others need rainy-season water.
3. The chapter also shows that many Indian festivals are connected with particular seasons.
4. Festivals such as Pongal, Makar Sankranti, Holi and Diwali appear in the chapter's seasonal matching activity.
5. These examples show that farming, celebrations and people's lives are closely connected with nature's seasonal rhythms.

10. Why can the cycle of seasons be considered an important lesson about change in life?

Answer:

1. Nature changes gradually from warmer to hotter, rainy and cooler conditions.
2. These changes repeat in a pattern from year to year.
3. Each season brings changes to plants, animals and people's activities.
4. The chapter explains that change is **natural and necessary**.
5. Therefore, the repeating seasons teach us that life itself moves through natural cycles of change.

9.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers – Applied Type:

1. Your younger brother asks why it is daytime in one place while another place may have night. How would you demonstrate this using a globe and a torch?

Answer:

1. I would use a **globe to represent the Earth** and a torch to represent the Sun.
2. I would shine the torch on one side of the globe and show that the illuminated part experiences day.
3. I would explain that the part away from the torchlight experiences night.
4. I would slowly rotate the globe to show different places moving into and out of the light.
5. This activity would demonstrate how the Earth's rotation produces the regular change between day and night.

2. Your class wants to study seasonal changes in the school surroundings for one year. Prepare a simple plan for the study.

Answer:

1. We would divide the year into **April–June, July–September, October–December and January–March**.

2. We would regularly observe plant life, birds and animals around the school.
3. We would also observe air, heat, light, water bodies and human activities.
4. We would record our observations in individual journals and then prepare a common seasons' chart.
5. At the end of the year, we would compare the observations to identify repeating seasonal patterns.

3. You notice that a tree near your house looks different during different months. How would you study these changes scientifically using the method suggested in the chapter?

Answer:

1. I would select the same tree and observe it regularly throughout the year.
2. I would record changes in its **leaves, flowers and fruits**.
3. I would write the date and observations in a seasons' journal.
4. I would compare the observations made during different periods of the year.
5. From the comparison, I could identify how the tree changes according to the seasonal rhythm.

4. A farmer wants to decide when to plant crops that require plenty of water. How can knowledge of seasons help the farmer?

Answer:

1. The farmer should observe seasonal changes and the arrival of the rainy season.
2. The chapter explains that some crops are planted during the rainy season because they require more water.
3. The farmer can also observe natural signs associated with approaching rain.
4. For example, the singing of the koel and ants carrying their eggs to higher ground are mentioned as signs related to approaching rain.
5. By combining seasonal knowledge with careful observation of nature, the farmer can decide an appropriate time for planting.

5. Suppose your friend says, "Seasons only change the weather." How would you use examples from your daily life to explain that seasons affect many other things?

Answer:

1. I would explain that seasons affect the growth of **plants** and the lives of **animals**.
2. They influence the types of crops farmers grow and harvest.
3. Seasons affect the **food we eat** and the **clothes we wear**.
4. Our activities and many festivals are also connected with different seasons.
5. Therefore, seasons influence both the natural world and many aspects of our everyday lives.

6. During a nature walk, you notice ants carrying their eggs to higher ground. How would you use what you learned in the chapter to interpret this observation?

Answer:

1. I would carefully observe the ants without disturbing them.
2. I would remember that the chapter identifies ants carrying eggs to higher ground as a natural sign of approaching rain.
3. I would record this observation and the date in my seasons' journal.
4. I would observe the weather over the following period to see whether rain occurs.
5. This would help me connect animal behaviour with seasonal changes described in the chapter.

7. Your school has students from Kerala, Kashmir, Assam and Rajasthan. How could you conduct a classroom activity to understand regional differences in seasons?

Answer:

1. I would ask students from different regions to describe their experiences of particular seasons.

- Students could compare **winter in Kerala with winter in Kashmir Valley**.
- They could also compare the **monsoon in Assam with the monsoon in Rajasthan**.
- The observations could be displayed on posters showing similarities and differences between the regions.
- This activity would help the class understand that the same season can be experienced differently in different parts of India.

8. Your class is preparing a “Seasons and Our Lives” exhibition. What five aspects would you include to show the influence of seasons?

Answer:

- I would display pictures showing how **plants and animals** change with seasons.
- I would include examples of different **foods** eaten during different seasons.
- I would show the kinds of **clothes and activities** associated with seasonal conditions.
- I would include examples of **crops and farming activities** connected with different seasons.
- I would display festivals associated with seasons to show how nature's rhythm is connected with human life.

9. Imagine you have to prepare a seasonal diary for your locality. What information would you record and how would it help you?

Answer:

- I would record changes in **plants, birds and animals** in my locality.
- I would observe changes in **air, heat and sunlight**.
- I would record rainfall and changes in **ponds, puddles and other water bodies**.
- I would note changes in people's activities during different periods of the year.
- Comparing these records would help me recognize repeating patterns and understand the seasons of my locality.

10. Your family wants to create a chart showing how daily life changes from one season to another. What would you include?

Answer:

- I would write the **name of each season** being compared.
- I would record the kinds of **food** commonly associated with each season in our family's experience.
- I would note the **clothes** worn during each season.
- I would add the **festivals and changes in nature** observed during that season.
- Comparing these details would show how seasonal changes are connected with our everyday life.

9.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions:

1. Riya shines a torch on a globe and slowly rotates the globe. What does the movement of a place from light into darkness represent?

- Change from summer to winter
- Change from day to night
- Movement of the Sun around Earth
- Formation of clouds

Answer: B. Change from day to night

2. Which observation provides the best evidence that the Earth rotates?

- Oceans contain water.
- Plants produce flowers.

- C. Different parts of Earth move into and out of sunlight.
- D. Festivals occur at different times.

Answer: C. Different parts of Earth move into and out of sunlight.

3. In the torch-and-globe activity, which combination is correctly matched?

- A. Torch—Earth; Globe—Sun
- B. Torch—Moon; Globe—Sun
- C. Torch—Sun; Globe—Earth
- D. Torch—Star; Globe—Moon

Answer: C. Torch—Sun; Globe—Earth

4. If point X on a globe is facing the torch and point Y is on the opposite side, which statement is correct?

- A. Both X and Y experience day.
- B. X represents day and Y represents night.
- C. X represents night and Y represents day.
- D. Both X and Y experience night.

Answer: B. X represents day and Y represents night.

5. The Sun appears to rise in the east and set in the west mainly because:

- A. the oceans move around Earth.
- B. the Earth rotates.
- C. seasons change every day.
- D. clouds carry the Sun across the sky.

Answer: B. the Earth rotates.

6. Which statement correctly compares seas and oceans according to the chapter?

- A. Seas are larger than oceans.
- B. Oceans are always surrounded completely by land.
- C. Seas are usually smaller and partly enclosed by land, while oceans are vast and open.
- D. Seas and oceans cover only one-fourth of Earth.

Answer: C. Seas are usually smaller and partly enclosed by land, while oceans are vast and open.

7. Approximately how much of the Earth's surface is covered by seas and oceans according to the chapter?

- A. One-fourth
- B. One-half
- C. Three-fourths
- D. The entire surface

Answer: C. Three-fourths

8. A student wants to identify a seasonal pattern in a mango tree. Which method would be MOST useful?

- A. Observe it once in one afternoon.
- B. Observe only its height.
- C. Record changes in its leaves, flowers and fruits over different months.
- D. Observe only the soil around it.

Answer: C. Record changes in its leaves, flowers and fruits over different months.

9. Which sequence best represents the gradual seasonal changes described in the chapter?

- A. Warmer → hotter → rains → cooler → warmer again
- B. Cooler → rains → earthquake → hotter
- C. Hotter → snowfall → rains → hotter
- D. Rains → night → day → winter

Answer: A. Warmer → hotter → rains → cooler → warmer again

10. A natural pattern that repeats year after year is best described in the chapter as:

- A. a natural rhythm.
- B. an accident.
- C. a daily activity.
- D. a water cycle experiment.

Answer: A. a natural rhythm.

11. Which is the correct pair of Indian season names?

- A. Vasanta—Spring; Grishma—Summer
- B. Vasanta—Winter; Grishma—Monsoon
- C. Varsha—Summer; Sharad—Spring
- D. Hemant—Monsoon; Shishir—Autumn

Answer: A. Vasanta—Spring; Grishma—Summer

12. Which set contains ONLY seasons mentioned in the chapter?

- A. Vasanta, Grishma, Varsha, Sharad
- B. Vasanta, Cyclone, Varsha, Winter
- C. Spring, Storm, Flood, Autumn
- D. Grishma, Drought, Hemant, Rainfall

Answer: A. Vasanta, Grishma, Varsha, Sharad

13. Which season is correctly matched with its name?

- A. Hemant — Pre-winter
- B. Shishir — Summer
- C. Varsha — Spring
- D. Sharad — Monsoon

Answer: A. Hemant — Pre-winter

14. A farmer in Odisha hears a koel singing. Based on the chapter, what is the most appropriate inference?

- A. Winter is beginning.
- B. Rains may be approaching.
- C. Summer has ended permanently.
- D. There will be no rain that year.

Answer: B. Rains may be approaching.

15. Ants carrying their eggs to higher ground may indicate that:

- A. rain may be approaching.
- B. winter has ended.
- C. there will be no seasonal change.
- D. the Earth has stopped rotating.

Answer: A. rain may be approaching.

16. Which observation would BEST demonstrate that seasons affect human life?

- A. People change food, clothing and activities during different seasons.
- B. A globe is round.
- C. Oceans contain water.
- D. The Earth has land masses.

Answer: A. People change food, clothing and activities during different seasons.

17. Two students record very different winter experiences in Kerala and Kashmir. What is the best conclusion?

- A. One student's observations must be wrong.
- B. Winter occurs only in Kashmir.
- C. The same season can be experienced differently in different regions.
- D. Kerala and Kashmir have no seasons.

Answer: C. The same season can be experienced differently in different regions.

18. The monsoon in Assam may be different from the monsoon in Rajasthan. What does this mainly demonstrate?

- A. Seasonal conditions can vary across regions.
- B. Seasons do not repeat.
- C. Rain occurs only in Assam.
- D. Rajasthan does not experience seasonal change.

Answer: A. Seasonal conditions can vary across regions.

19. A crop requires a large amount of water. Based on the chapter, which season would most logically support its cultivation?

- A. Rainy season
- B. Only pre-winter
- C. Only autumn
- D. Any season regardless of water

Answer: A. Rainy season

20. Which group of observations would provide the MOST complete picture of seasonal changes?

- A. Only plants
- B. Only rainfall
- C. Only people's clothes
- D. Plants, animals, air, heat, light, water and human activities

Answer: D. Plants, animals, air, heat, light, water and human activities

21. Why is maintaining a seasons' journal throughout the year better than observing nature for only one day?

- A. It helps identify patterns of change over time.
- B. It prevents seasons from changing.
- C. It makes all seasons identical.
- D. It changes the behaviour of plants.

Answer: A. It helps identify patterns of change over time.

22. Which observation would belong under the “Water and Water Bodies” theme in a seasons' chart?

- A. Changes in flowers
- B. Changes in ponds and puddles
- C. Changes in clothing
- D. Changes in bird behaviour

Answer: B. Changes in ponds and puddles

23. Which conclusion can be drawn from the chapter's discussion of festivals such as Pongal, Makar Sankranti, Holi, Diwali and Baisakhi?

- A. Festivals have no connection with nature.
- B. Festivals occur only in winter.
- C. Many celebrations are linked with seasons, harvests or seasonal occasions.
- D. All festivals are celebrated on the same day.

Answer: C. Many celebrations are linked with seasons, harvests or seasonal occasions.

24. Consider the following observations:

- I. Flowers bloom and dry up.**
- II. Leaves fall and grow again.**
- III. Weather becomes warmer, rainy and cooler.**
- IV. Seasonal patterns repeat over time.**

Which combination BEST supports the idea that change is a natural part of life?

- A. I and II only
- B. III and IV only

C. I, II and III only

D. I, II, III and IV

Answer: D. I, II, III and IV

25. Which statement BEST summarizes the central idea of “Rhythms of Nature”?

A. Only weather changes with time.

B. Nature changes randomly without any patterns.

C. Repeating changes such as day and night and seasons create natural rhythms that influence living things and human life.

D. Human activities are completely independent of nature.

Answer: C. Repeating changes such as day and night and seasons create natural rhythms that influence living things and human life.

9.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities for Teaching:

The following practices are closely aligned with the chapter’s emphasis on **observation, journaling, activities, comparison and reflection.**

- (1) **Maintain a Seasons’ Journal:** Encourage students to observe their surroundings regularly and record changes in plants, animals, weather, water and human activities. Periodic sharing of journal entries can strengthen observation and communication skills.
- (2) **Use the Globe-and-Torch Demonstration:** Demonstrate day and night using a globe and torch. Allow students to rotate the globe themselves and identify which part experiences day and which experiences night.
- (3) **Create a Classroom Seasons’ Chart:** Maintain a large chart divided into **April–June, July–September, October–December and January–March.** Students can periodically add their observations and compare how nature changes throughout the year.
- (4) **Conduct Regular Nature Observation Walks:** Take students around the school campus to observe changes in **leaves, flowers, fruits, birds, animals, ponds, puddles and other surroundings.** Ask them to record or sketch what they notice rather than merely memorising seasonal facts.
- (5) **Adopt Collaborative Group Learning:** Divide students into groups focusing on **plant life; birds and animals; air, heat and light; water and water bodies; and human activities.** Each group can prepare a poster and present its seasonal observations to the class.
- (6) **Connect Lessons with Local Experiences:** Encourage students to share seasonal signs they have personally observed, such as changes in rainfall, plants or animal behaviour. The chapter itself uses examples such as the **koel's singing in Odisha** and **ants carrying eggs to higher ground** as signs associated with approaching rain.
- (7) **Use Regional Comparison:** Ask students to compare seasonal experiences in different parts of India, such as **winter in Kerala and Kashmir Valley** or **monsoon in Assam and Rajasthan.** This develops an understanding that seasonal experiences can differ across regions.
- (8) **Integrate Farming and Festivals:** Connect seasonal learning with crops, harvests and festivals. Students can prepare charts showing how farming practices and celebrations are linked with different seasons.
- (9) **Promote Learning through Comparison:** Ask students to compare their observations from one season with another rather than learning each season separately. This helps

them discover the chapter's central idea that seasonal changes form a **repeating natural rhythm**.

- (10) **End with Reflection and Real-Life Connection:** After completing the chapter, ask students to reflect on how seasons influence their **food, clothing, activities, crops, festivals and surroundings**. This reinforces the idea that change is natural and that life moves in cycles.

9.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

The chapter provides good opportunities for innovative, **activity-based, experiential and collaborative learning**, especially because it encourages students to observe changes in nature over time.

- (1) **Digital Seasons Diary:** Students can photograph the same tree, plant or part of the school garden at regular intervals. The photographs can be arranged chronologically to create a digital visual diary showing changes in leaves, flowers and fruits. This extends the chapter's seasons-journal activity into a visual learning experience.
- (2) **“Earth in Motion” Role Play:** Transform the globe-and-torch experiment into a role-play in which one student represents the **Sun**, another represents the **Earth**, and classmates identify the day and night sides. This makes the concept of Earth's rotation more memorable and participatory.
- (3) **Season Detectives Challenge:** Form student teams and assign each team clues such as changes in plants, birds, animals, sunlight, water bodies or human activities. Students act as “Season Detectives” and use their observations to identify seasonal patterns.
- (4) **Interactive Seasonal Learning Wall:** Convert the classroom seasons' chart into an interactive wall where students periodically attach drawings, photographs, leaves, observation notes and weather-related records. The display can develop throughout the academic year instead of remaining a one-time classroom activity.
- (5) **Nature Time-Lapse Project:** Students can repeatedly observe or photograph the same plant or location over several weeks. Arranging these observations in sequence helps them visually discover gradual changes and understand the idea of nature's repeating rhythms.
- (6) **Natural Signs Investigation:** Introduce the chapter's examples of the **koel singing before rains** and **ants carrying eggs to higher ground** as observation prompts. Students can collect similar seasonal observations from family members and later discuss them in class, while distinguishing reported observations from what they personally observed.
- (7) **Season-to-Season Regional Exchange:** Assign groups regions such as Kerala, Kashmir, Assam and Rajasthan. Students can create illustrated comparison cards showing how winter or monsoon experiences differ across regions, based on the contrasts introduced in the chapter.
- (8) **“Season, Crop and Festival” Connection Game:** Prepare cards containing seasons, crops/farming clues and festivals. Students work in teams to make meaningful connections and explain their reasoning, reinforcing the chapter's links among seasons, agriculture and celebrations.
- (9) **Student Weather & Nature Reporters:** Assign a few students each week to become “Nature Reporters.” They can briefly report observations about heat, sunlight, rainfall, plants, animals or water bodies and add the findings to the classroom seasonal record.
- (10) **“My Life Through the Seasons” Creative Project:** Students can create a foldable, wheel or scrapbook showing **season → food → clothes → festivals → changes in**

nature. This creatively adapts the chapter's concluding comparison activity and helps children connect scientific learning with their everyday experiences.

9.17: Practicing Questions/Question Bank

A. Fill in the Blanks:

1. The Earth continuously _____ on its axis.
Answer: rotates
2. The side of the Earth facing the Sun experiences _____.
Answer: day
3. The side of the Earth away from sunlight experiences _____.
Answer: night
4. The Sun appears to rise in the _____.
Answer: east
5. A _____ is a model of the Earth.
Answer: globe
6. Seas and oceans cover about _____ of the Earth's surface.
Answer: three-fourths
7. The repeating pattern of changes in nature throughout the year is called _____.
Answer: seasons
8. _____ is the Indian name for the Spring season.
Answer: Vasanta
9. _____ is the Indian name for the Monsoon season.
Answer: Varsha
10. _____ is the Indian name for the Winter season.
Answer: Shishir
11. In Odisha, the singing of the _____ is considered a sign that rains are approaching.
Answer: koel
12. Ants may carry their eggs to _____ ground before rain.
Answer: higher
13. Different _____ are grown by farmers in different seasons.
Answer: crops
14. A seasons' _____ can be used to record changes observed throughout the year.
Answer: journal
15. Seasons remind us that change is natural and _____.
Answer: necessary

B. One-Mark Descriptive Questions:

1. **What causes day and night?**
Answer: The rotation of the Earth causes day and night.

2. What is a globe?

Answer: A globe is a ball-shaped model representing the Earth.

3. In which direction does the Sun appear to rise?

Answer: The Sun appears to rise in the east.

4. What are seasons?

Answer: Seasons are repeating patterns of changes in nature during the year.

5. Name the Indian season corresponding to Summer.

Answer: Grishma.

6. Which season is called Varsha?

Answer: Varsha is the Monsoon season.

7. Which season is called Hemant?

Answer: Hemant is the Pre-winter season.

8. Name one natural sign of approaching rain mentioned in the chapter.

Answer: Ants carrying their eggs to higher ground is a natural sign of approaching rain.

9. Why are some crops planted during the rainy season?

Answer: Some crops are planted during the rainy season because they require more water.

10. What can students record in a seasons' journal?

Answer: Students can record seasonal changes they observe in their surroundings.

C. Two-Mark Descriptive Questions:**1. How does the Earth's rotation cause day and night?**

Answer:

1. The part of the Earth facing the Sun receives sunlight and experiences day.
2. The part away from sunlight experiences night as the Earth rotates.

2. Differentiate between seas and oceans.

Answer:

1. Seas are generally smaller and partly enclosed by land.
2. Oceans are vast and open water bodies.

3. Name any four of the six seasons mentioned in the chapter.

Answer:

1. Vasanta (Spring) and Grishma (Summer).
2. Varsha (Monsoon) and Sharad (Autumn).

4. How can students observe seasonal changes in plants?

Answer:

1. They can observe changes in leaves, flowers and fruits throughout the year.
2. They can record these changes in a seasons' journal.

5. How do seasons influence farming?**Answer:**

1. Different crops grow well during different seasons.
2. Some crops are planted during the rainy season because they require more water.

6. Give two examples of natural signs associated with approaching rain.**Answer:**

1. In Odisha, the singing of the koel indicates that rains may be approaching.
2. Ants carrying their eggs to higher ground is another natural sign mentioned in the chapter.

7. Why can the same season be experienced differently in different parts of India?**Answer:**

1. Seasonal conditions vary from one region to another.
2. For example, winter in Kerala differs from winter in Kashmir Valley.

8. Mention two ways seasons influence our daily lives.**Answer:**

1. Seasons influence the food we eat and the clothes we wear.
2. They also influence our activities and celebrations.

D. Three-Mark Descriptive Questions:**1. Explain how day and night occur.****Answer:**

1. The Earth rotates continuously.
2. The side facing the Sun receives sunlight and experiences day.
3. The side away from sunlight experiences night.

2. Describe the globe-and-torch activity for demonstrating day and night.**Answer:**

1. Keep a globe on a table and shine a torch on one side.
2. The lighted side represents day and the dark side represents night.
3. Rotate the globe slowly to observe different places moving between light and darkness.

3. How can a seasons' journal help students understand nature?**Answer:**

1. Students can regularly record changes in their surroundings.
2. They can compare observations about plants, animals, weather and water during different periods.
3. This helps them identify repeating seasonal patterns.

4. Explain three ways seasons influence people's lives.**Answer:**

1. Seasons influence the food people eat.
2. They affect the clothes people wear and the activities they perform.
3. They also influence crops and festivals.

5. How can students study seasonal changes in their school surroundings?**Answer:**

1. They can regularly observe plants, birds, animals and water bodies.
2. They can record changes in air, heat, light and human activities.
3. They can compare their observations at different times of the year.

6. Explain why seasons are called a natural rhythm.**Answer:**

1. Nature gradually becomes warmer, hotter, rainy and cooler during the year.
2. Similar changes occur again the following year.
3. This repeating pattern creates a natural rhythm called seasons.

7. How are crops connected with seasonal changes?**Answer:**

1. Different crops grow best during different seasons.
2. Some grow well in winter or summer.
3. Crops needing more water may be planted during the rainy season.

8. How do natural signs help people understand seasonal changes?**Answer:**

1. People observe the behaviour of birds and animals.
2. Koel singing and ants moving their eggs are associated with approaching rain in the chapter.
3. Such observations help people recognize changes occurring in nature.

E. Five-Mark Descriptive Questions:**1. Explain the occurrence of day and night with the help of the globe-and-torch activity.****Answer:**

1. A globe represents the Earth and a torch represents the Sun.
2. Shine the torch on one side of the globe.
3. The side receiving light represents day, while the opposite side represents night.
4. Slowly rotate the globe and observe different places moving into and out of the light.

5. The activity demonstrates that the Earth's rotation causes the regular change between day and night.

2. **Explain how seasons influence nature and human life.**

Answer:

1. Seasons influence the growth of plants.
2. They affect the lives and activities of animals.
3. They influence the food people eat and the clothes they wear.
4. Farmers grow and harvest crops according to seasonal conditions.
5. Many human activities and festivals are also connected with seasons.

3. **Describe how your class could conduct a year-long study of seasonal changes.**

Answer:

1. Divide observations into April–June, July–September, October–December and January–March.
2. Observe plant life and birds and animals during each period.
3. Record changes in air, heat, light, water and water bodies.
4. Observe changes in human activities and record all findings in journals and a classroom chart.
5. Compare the observations to identify repeating seasonal patterns.

4. **Explain the six seasons mentioned in the chapter and their names.**

Answer:

1. **Vasanta** refers to Spring.
2. **Grishma** refers to Summer.
3. **Varsha** refers to Monsoon and **Sharad** refers to Autumn.
4. **Hemant** refers to Pre-winter.
5. **Shishir** refers to Winter.

5. **“Nature and human life follow seasonal rhythms.” Explain this statement.**

Answer:

1. Plants show changes in their leaves, flowers and fruits during different times of the year.
2. Animals and birds also show changes connected with seasonal conditions.
3. Farmers grow different crops according to different seasons.
4. People's food, clothing and activities are influenced by seasons.
5. Festivals and harvest celebrations further show the connection between human life and nature's seasonal rhythms.

5th Standard World Around Us Book Chapter 10

Chapter 10: Earth — Our Shared Home

10.1 Summary of the Chapter:

Summary of Chapter 10: Earth—Our Shared Home:

- (1) **Earth is our common home.** When viewed from space, there are no visible borders between countries. The chapter emphasizes that all human beings share one planet and are part of one humanity.
- (2) **Nature has no boundaries.** Air, water, clouds, seeds and animals move freely across regions and countries, showing that the natural world is deeply interconnected.
- (3) **Migratory birds connect distant places.** Rosy starlings travel thousands of kilometres from Russia, Mongolia and nearby regions to India during winter. They also help farmers by eating pests such as locusts and grasshoppers.
- (4) **Ideas and practices also travel across the world.** Yoga originated as an ancient Indian practice for a healthy body and peaceful mind and gradually spread to countries around the world.
- (5) **Food connects different cultures.** Chillies originally came from South America and were brought to India by Portuguese travellers about 400–500 years ago. Other foods such as potatoes, tomatoes, peanuts and cashews also travelled long distances before becoming part of Indian food.
- (6) **India has also shared foods and knowledge with the world.** The chapter explains how the knowledge and technique of making sugar from sugarcane spread from India to other parts of the world, showing that exchange happens in both directions.
- (7) **Plants can become part of new cultures.** Marigolds originated in Mexico but travelled to India and became closely associated with temples, homes, weddings and festivals such as Diwali.
- (8) **Animals have also travelled between countries.** Indian cow breeds such as **Gir, Kankrej and Ongole** were taken to Brazil and became important there because of their useful qualities and ability to adapt.
- (9) **Earth is a ‘Web of Life’.** People, animals, plants, foods, ideas and traditions move, mix and influence one another. These journeys demonstrate that different cultures continually learn from and inspire each other.
- (10) **“Vasudhaiva Kutumbakam” means “the world is one family.”** The chapter concludes that people, animals, plants, rivers, air and the entire natural world belong to one shared family. Therefore, we should respect and care for one another and protect Earth for ourselves, others and future generations.

10.2 Important Formulas:

Important Formulas – Chapter 10: *Earth—Our Shared Home*:

The uploaded Chapter 10 is primarily **conceptual and activity-based**. It discusses the interconnectedness of Earth through migration, travel, trade, food, plants, animals, yoga, and the idea of *Vasudhaiva Kutumbakam*.

There are no specific mathematical or scientific formulas prescribed in this chapter.

However, students may use a few **basic quantitative relationships** if teachers frame numerical/application questions around the chapter:

No.	Quantitative concept	Formula / Relationship	Possible use
1	Distance	Distance = Speed × Time	Calculating the distance travelled by migratory birds
2	Speed	Speed = Distance ÷ Time	Finding the average speed of a travelling bird
3	Time	Time = Distance ÷ Speed	Estimating travel time
4	Percentage	Percentage = (Part ÷ Whole) × 100	Comparing proportions in data-based questions
5	Fraction to percentage	Percentage = Fraction × 100	Interpreting expressions such as “three-fourths”
6	Three-fourths	$\frac{3}{4} \times 100 = 75\%$	Converting a fraction into percentage
7	Difference	Difference = Larger value – Smaller value	Comparing distances, quantities or populations
8	Total	Total = Sum of individual quantities	Adding distances or quantities from different places
9	Average	Average = Sum of values ÷ Number of values	Comparing distances or other numerical observations
10	Map scale	Actual Distance = Map Distance × Scale Factor	Map/globe journey activities

Chapter-specific quantitative facts useful for problems:

The chapter states that rosy starlings fly **thousands of kilometres** from southern Russia, Mongolia and nearby countries to India every winter. It also describes yoga as having been practised in India for **more than 3,000 years**.

The chapter says chillies were brought from South America to India about **400–500 years ago**, which can support simple elapsed-time or timeline questions. It also states that **more than three-fourths** of Brazil's milk comes from the three Indian cow breeds—Gir, Kankrej and Ongole—providing an opportunity for simple fraction/percentage questions.

10.3 Fill-Up the Blank LOTS type questions with Answers: (35 Questions)

Fill-in-the-Blank Questions with Answers — LOTS Type:

- The Earth looks like a _____ planet when seen from space.
Answer: blue
- Wing Commander _____ was the first Indian to see the Earth from space.
Answer: Rakesh Sharma
- DIGIPIN gives every small place in India a special _____-character digital code.
Answer: 10
- Air, water, clouds, seeds and animals move freely because nature has no _____.
Answer: boundaries
- Everything on Earth is linked through nature, trade, travel and the ways we care for our _____.
Answer: planet
- Rosy starlings visit India every _____.
Answer: winter

7. Rosy starlings travel to India from the southern part of Russia, _____ and nearby countries.
Answer: Mongolia
8. Rosy starlings feed on locusts and _____.
Answer: grasshoppers
9. Yoga has been practised in India for more than _____ years.
Answer: 3,000
10. The United Nations declared _____ **June** as the International Day of Yoga.
Answer: 21
11. Spices like pepper and cardamom from India were called _____ **gold** by traders.
Answer: black
12. Chilli plants were originally found only in _____ **America**.
Answer: South
13. Travellers from _____ brought chillies from South America to India.
Answer: Portugal
14. Before chillies arrived in India, people used _____ **pepper** to spice up their food.
Answer: black
15. Potatoes, tomatoes, peanuts and _____ also travelled a long way before becoming part of Indian food.
Answer: cashews
16. Sugar travelled from _____ to other parts of the world.
Answer: India
17. The marigold flower originally came from _____.
Answer: Mexico
18. Marigolds are commonly used in India during festivals such as _____.
Answer: Diwali
19. Portuguese traders took some Indian cows to _____.
Answer: Brazil
20. Gir, Kankrej and _____ are the three Indian cow breeds mentioned in the chapter.
Answer: Ongole
21. The stories in the chapter describe Earth as a _____ **of Life**.
Answer: Web
22. People, animals, plants and _____ travel, mix and grow together.
Answer: ideas
23. The ancient Indian saying _____ **Kutumbakam** means “the world is one family.”
Answer: Vasudhaiva
24. We all share the same home—our _____.
Answer: Earth
25. Earth is a gift that we must protect for ourselves, others and the _____.
Answer: future

Answer Key:

1. Blue | 2. Rakesh Sharma | 3. 10 | 4. Boundaries | 5. Planet | 6. Winter | 7. Mongolia | 8. Grasshoppers | 9. 3,000 | 10. 21 | 11. Black | 12. South | 13. Portugal | 14. Black | 15. Cashews | 16. India | 17. Mexico | 18. Diwali | 19. Brazil | 20. Ongole | 21. Web | 22. Ideas | 23. Vasudhaiva | 24. Earth | 25. Future

10.4 Fill-Up the Blank HOTS type questions with Answers: (25 Questions)**Fill-in-the-Blank Questions with Answers — HOTS Type:**

These questions require students to **infer, connect, apply, compare, and reason** using ideas from the chapter.

1. If rosy starlings stopped visiting India, farmers might see an increase in crop _____ because the birds eat locusts and grasshoppers.
Answer: pests
2. The movement of rosy starlings from Russia and Mongolia to India shows that nature is not restricted by human-made _____.
Answer: boundaries
3. If a bird moves to a warmer place during winter, the movement can help it find more suitable _____ conditions.
Answer: weather
4. If people in many countries practise yoga today, it demonstrates how an Indian practice can spread through cultural _____.
Answer: sharing
5. Yoga becoming popular around the world shows that useful _____ can travel from one society to another.
Answer: practices
6. If chillies had never reached India, Indian food might have continued depending more on _____ **pepper** for spiciness.
Answer: black
7. Chillies becoming common in Indian kitchens shows that a plant from another country can become part of a new _____.
Answer: culture
8. Potatoes, tomatoes, peanuts and cashews demonstrate that many everyday foods have histories involving long-distance _____.
Answer: travel
9. Chillies travelled from South America to India, while sugar travelled from India to other countries. This shows that cultural exchange can happen in _____.
directions.
Answer: both
10. The spread of sugar-making knowledge from India demonstrates how knowledge can travel through trade and _____.
Answer: travel
11. If an Indian family uses marigolds during a festival, it illustrates how something originating in another country can become part of local _____.
Answer: traditions
12. The use of marigolds in both Mexico and India shows that geographically distant cultures can develop meaningful _____.
Answer: connections
13. Indian cows thriving in Brazil shows that some animals can _____ successfully to a new environment.
Answer: adapt
14. The journeys of birds, plants and animals across countries demonstrate that living things can connect different parts of the _____.
Answer: world

15. When food, music, stories and inventions move between countries, people get opportunities to _____ from one another.
Answer: learn
16. If an object in our home was produced in another country, it demonstrates our connection with the world through _____.
Answer: trade
17. The journeys of yoga, chillies, sugar and marigolds show that ideas and products can become part of cultures far from their places of _____.
Answer: origin
18. If people understand Earth as a “Web of Life,” they should recognise that people, animals, plants and nature are _____.
Answer: interconnected
19. A student who follows the idea of *Vasudhaiva Kutumbakam* should treat people from different countries as members of one _____.
Answer: family
20. If pollution in one region affects water, air, plants and animals elsewhere, it supports the chapter's idea that nature has no _____.
Answer: boundaries
21. When we care for the Earth, we are indirectly caring for ourselves because humans and _____ are connected.
Answer: nature
22. If people see Earth as one shared home, they are more likely to accept a common responsibility to _____ it.
Answer: protect
23. The movement of birds, foods, plants, animals and ideas shows that Earth is a living _____ of life.
Answer: web
24. Although people may speak different languages and play different games, they can still _____ and inspire one another.
Answer: learn
25. Protecting Earth today helps ensure that future _____ can also enjoy its resources and living world.
Answer: generations

Answer Key:

1. pests | 2. boundaries | 3. weather | 4. sharing | 5. practices | 6. black | 7. culture | 8. travel | 9. both | 10. travel | 11. traditions | 12. connections | 13. adapt | 14. world | 15. learn | 16. trade | 17. origin | 18. interconnected | 19. family | 20. boundaries | 21. nature | 22. protect | 23. web | 24. learn | 25. generations

10.5 One-mark questions with Answers of LOTS Type: (25 Questions)**Fill-in-the-Blank Questions with Answers — HOTS Type:**

1. If rosy starlings did not migrate to India, the number of crop _____ such as locusts and grasshoppers might increase.
Answer: pests
2. Rosy starlings travelling thousands of kilometres across countries demonstrate that nature has no _____.
Answer: boundaries

3. Rosy starlings prefer India during winter because they can enjoy _____ weather here.
Answer: warm
4. A farmer who protects migratory birds may indirectly protect his _____ because the birds eat harmful pests.
Answer: crops
5. If an idea developed in one country becomes popular worldwide, it shows that ideas can cross national _____.
Answer: boundaries
6. Yoga spreading from India to almost every country is an example of cultural _____.
Answer: sharing
7. If people practise yoga to keep their minds peaceful, yoga contributes to their mental _____.
Answer: well-being
8. If chillies had never reached India, people might still depend more heavily on _____ pepper to make their food spicy.
Answer: black
9. Chillies becoming a common ingredient in Indian cooking demonstrates how a foreign plant can become part of a new _____.
Answer: culture
10. Potatoes, tomatoes, peanuts and cashews becoming common foods in India demonstrates the movement and _____ of food cultures.
Answer: blending
11. Chillies came to India while sugar travelled from India to other countries, showing that cultural exchange can happen in _____ directions.
Answer: both
12. If people in another country learn an Indian method of making sugar, it is an example of the transfer of _____.
Answer: knowledge
13. The journey of marigolds from Mexico to India shows how a plant can become part of another country's cultural _____.
Answer: traditions
14. Marigolds being important in celebrations in both Mexico and India shows that different cultures can have _____ practices.
Answer: similar
15. Indian cows thriving in Brazil indicates their ability to _____ to a different environment.
Answer: adapt
16. If plants, animals and people depend on one another, harming one part of this system may affect the _____ parts too.
Answer: other
17. A toy made in another country but used by a child in India demonstrates global _____ through trade.
Answer: connection
18. Foods and objects travelling from one country to another show that _____ helps connect people around the world.
Answer: trade

19. If a student traces the journey of chillies from South America to India on a globe, the activity helps the student understand global _____.
Answer: connections
20. The movement of birds, seeds, people and ideas across the world forms a living _____ of life.
Answer: web
21. When people from different cultures learn from and inspire one another, cultural _____ becomes possible.
Answer: exchange
22. A child who believes in *Vasudhaiva Kutumbakam* would consider people from different nations as members of one _____.
Answer: family
23. If Earth is our shared home, protecting its plants, animals, rivers and air becomes our shared _____.
Answer: responsibility
24. Caring for nature also means caring for ourselves because human beings and _____ are connected.
Answer: nature
25. Protecting Earth today ensures that people in the _____ can also enjoy and benefit from it.
Answer: future

10.6 One-mark questions with Answers of HOTS Type: (30 Questions)

One-Mark Descriptive Questions with Answers — HOTS Type:

1. **Why are rosy starlings helpful to Indian farmers?**
Answer: Rosy starlings help farmers by eating crop pests such as locusts and grasshoppers.
2. **What does the migration of rosy starlings teach us about nature?**
Answer: Their migration teaches us that nature is interconnected and does not follow human-made boundaries.
3. **Why might rosy starlings migrate to India during winter?**
Answer: They migrate to India to enjoy its warm weather and find food.
4. **How does the movement of air, water and animals support the idea that “nature has no boundaries”?**
Answer: They move freely across regions and countries without following political borders.
5. **How does yoga show that ideas can connect the world?**
Answer: Yoga began in India and gradually spread to people in countries across the world.
6. **Why do you think yoga became popular in many countries?**
Answer: Yoga may have become popular because it helps people keep their bodies healthy and minds peaceful.
7. **What might Indian food have been like if chillies had never reached India?**
Answer: Indian food might have depended more on black pepper for spiciness.
8. **What does the journey of chilli from South America to India teach us?**
Answer: It shows how a plant from a distant land can become an important part of another culture and cuisine.

9. How are chillies and sugar examples of two-way exchange between countries?

Answer: Chillies travelled to India, while the knowledge of making sugar travelled from India to other parts of the world.

10. What can we learn from the journeys of potatoes, tomatoes, peanuts and cashews?

Answer: We learn that many foods we use every day originally travelled from distant parts of the world.

11. Why can our meals be called “world travellers”?

Answer: Our meals contain foods and flavours that have travelled between different parts of the world.

12. How did trade and travel help spread the knowledge of making sugar?

Answer: Trade and travel carried India's sugar-making knowledge and techniques to other parts of the world.

13. What does the popularity of marigolds in India teach us about cultural exchange?

Answer: It shows that something from another country can be accepted and become an important part of local traditions.

14. Why might both Indian and Mexican cultures use marigolds during celebrations?

Answer: Both cultures may value marigolds for their bright colours and their association with celebration and spirituality.

15. What does the success of Indian cow breeds in Brazil tell us?

Answer: It shows that animals can move to new places and become useful and important there.

16. How do objects from other countries found in our homes show global connection?

Answer: They show that trade and travel connect our everyday lives with people and places around the world.

17. Why is Earth described as a “living web of life”?

Answer: Earth is a living web because people, animals, plants and ideas are interconnected and influence one another.

18. How can people with different languages and customs still be connected?

Answer: They can be connected by learning, sharing and inspiring one another.

19. What behaviour would show that a person follows *Vasudhaiva Kutumbakam*?

Answer: Treating people, animals and nature with respect, care and love reflects *Vasudhaiva Kutumbakam*.

20. Why should we care for Earth if we consider the world one family?

Answer: We should care for Earth because all living beings depend on it and share it as their common home.

21. How does caring for the environment also mean caring for ourselves?

Answer: Humans depend on nature, so protecting the environment also protects human life and well-being.

22. What could happen if people failed to protect their shared home, Earth?

Answer: People, animals and plants could lose the healthy environment and resources on which they depend.

23. How does sharing ideas and traditions strengthen connections among people?

Answer: Sharing allows people from different cultures to learn from and inspire one another.

24. Why should countries work together to protect nature?

Answer: Countries should work together because air, water, animals and other parts of nature move across national boundaries.

25. What responsibility does the chapter suggest we have towards future generations?

Answer: We have a responsibility to protect Earth so that future generations can also live and thrive on it.

10.7 Two-mark questions with Answers of LOTS Type: (20 Questions)**Two-Mark Descriptive Questions with Answers — LOTS Type:****1. How does the Earth look when viewed from space?**

Answer:

1. From space, Earth looks tiny, and smaller details such as cities and villages cannot be seen.
2. We can mainly see the broad shapes of land masses and the sea on our blue planet.

2. What is DIGIPIN? How is it useful?

Answer:

1. DIGIPIN is a digital version of an address that gives every small place in India a special 10-character code.
2. It helps postmen, ambulances and delivery persons locate places more easily.

3. What does the chapter mean by “nature has no boundaries”?

Answer:

1. Nature is not divided by the borders that separate countries.
2. Air, water, clouds, seeds and animals move freely across the world.

4. From where do rosy starlings come to India, and when do they visit?

Answer:

1. Rosy starlings come from the southern part of Russia, Mongolia and nearby countries.
2. They visit India every winter.

5. How do rosy starlings help farmers?

Answer:

1. Rosy starlings feed on locusts and grasshoppers.
2. By eating these crop pests, they help farmers protect their crops.

6. What does the chapter tell us about the origin and purpose of yoga?

Answer:

1. Yoga has been practised in India for more than 3,000 years.
2. It was practised to keep the body healthy, the mind peaceful and to live in harmony with oneself and nature.

7. How did yoga spread around the world?

Answer:

1. Travellers, scholars and teachers from India shared yoga with people in other countries.
2. Over time, people across the world began learning and practising it.

8. What is the International Day of Yoga?

Answer:

1. The United Nations declared **21 June** as the International Day of Yoga in 2014.
2. Millions of people around the world practise yoga together on this occasion.

9. From where did chillies come to India, and who brought them?

Answer:

1. Chillies originally came from South America.
2. Portuguese travellers brought them from South America to India about 400–500 years ago.

10. What did Indians use to make food spicy before chillies arrived? How did chillies become important later?

Answer:

1. Before chillies arrived, people in India used black pepper to spice their food.
2. After their arrival, chillies became an important part of Indian kitchens and cuisine.

11. Name four foods that travelled a long way before becoming common in India.

Answer:

1. Potatoes and tomatoes are two such foods mentioned in the chapter.
2. Peanuts and cashews are two other examples.

12. How did sugar-making develop in India?

Answer:

1. The method of making jaggery from sugarcane juice was first discovered in India.
2. Over time, people found a way to turn jaggery into sugar.

13. How did the knowledge of making sugar reach other parts of the world?

Answer:

1. The knowledge and technique of making sugar developed in India.
2. It spread to other parts of the world through trade and travel.

14. Where did the marigold originate, and where is it commonly used in India?

Answer:

1. The marigold flower originated in Mexico and later travelled to India.
2. In India, it is commonly seen in temples, homes, weddings and festivals such as Diwali.

15. What does the chapter tell us about Indian cows in Brazil?

Answer:

1. Portuguese traders took some Indian cows to Brazil, where they adapted well.
2. The chapter names **Gir, Kankrej and Ongole** as three important Indian cow breeds there.

16. What is meant by the “Web of Life”?

Answer:

1. Earth is a living web in which people, animals, plants and ideas travel, mix and grow together.
2. It reminds us that all life on Earth is connected.

17. How are people around the world connected?

Answer:

1. People are connected through nature, trade, travel and the things they share.
2. Food, clothes, toys, music, stories, ideas and inventions can travel between different parts of the world.

18. What does “Vasudhaiva Kutumbakam” mean? What does it teach us?

Answer:

1. *Vasudhaiva Kutumbakam* means “**the world is one family.**”
2. It teaches us to live with respect, care and love for one another and for Earth.

19. Why is Earth special according to the chapter?

Answer:

1. Earth is the only planet we know that has life.
 2. It has supported people, animals and plants for thousands of years.
20. **Why should we protect the Earth?**

Answer:

1. Earth is our shared home and supports all living beings.
2. We must protect it for ourselves, others and the future.

10.8. Two-mark questions with Answers of HOTS Type: (20 Questions)

Two-Mark Descriptive Questions with Answers — HOTS Type:

1. **Why does the Earth appear to have no countries or borders when viewed from space?**

Answer:

1. Political borders are human-made divisions and are not naturally visible on Earth.
2. This reminds us that all people share the same planet as their common home.

2. **How does the migration of rosy starlings show that nature has no boundaries?**

Answer:

1. Rosy starlings travel thousands of kilometres from Russia, Mongolia and nearby regions to India.
2. Their journey shows that animals move across countries without following human-made borders.

3. **What might happen to farmers if rosy starlings stopped visiting India? Give a reason.**

Answer:

1. Farmers might face an increase in crop pests such as locusts and grasshoppers.
2. This is because rosy starlings help farmers by feeding on these pests.

4. **Why should countries cooperate to protect migratory birds?**

Answer:

1. Migratory birds travel through different countries during their journeys.
2. Protecting them requires safe environments across the different places through which they move.

5. **Why do you think yoga became popular in many countries?**

Answer:

1. Yoga helps people keep their bodies healthy and their minds peaceful.
2. Travellers, scholars and teachers helped share this useful Indian practice with the world.

6. **What does the worldwide practice of yoga teach us about the movement of ideas?**

Answer:

1. Useful ideas and practices can travel from one culture to another.
2. Yoga's journey from India to almost every country shows how people across the world learn from one another.

7. **How might Indian food have been different if chillies had never reached India?**

Answer:

1. Many Indian dishes might not have had the chilli-based spiciness familiar today.
2. People might have continued using more black pepper to make their food spicy.

8. **How does the journey of chilli show the blending of cultures?**

Answer:

1. Chillies travelled from South America to India and grew successfully in a new environment.
 2. They eventually became an important part of Indian kitchens and cuisine.
9. **Why can our everyday meals be described as “world travellers”?**

Answer:

1. Many foods we eat originated in different parts of the world and travelled to new lands.
 2. Our meals therefore contain flavours and ingredients connected with different countries and cultures.
10. **How do the journeys of chilli and sugar show a two-way exchange between India and the world?**

Answer:

1. Chillies travelled from South America to India and became part of Indian cuisine.
 2. Sugar-making knowledge developed in India and later spread to other parts of the world.
11. **What can we infer from the marigold becoming important in Indian celebrations?**

Answer:

1. Plants from another country can be accepted and given new cultural importance.
 2. The Mexican marigold becoming common in Indian temples, weddings and festivals is an example of such cultural blending.
12. **What does the success of Indian cow breeds in Brazil tell us about the movement of animals?**

Answer:

1. Animals taken to another country may adapt successfully to its conditions.
 2. Indian breeds such as Gir, Kankrej and Ongole became important in Brazil.
13. **How can an object made in another country connect you with the wider world?**

Answer:

1. Using such an object shows that products travel between different countries through trade.
 2. It demonstrates how our everyday lives are linked with people and places around the world.
14. **Why is Earth compared to a “Web of Life”?**

Answer:

1. People, animals, plants and ideas are connected and influence one another.
 2. Their movement, sharing and interaction make Earth a living network of connections.
15. **How can people from different cultures learn from one another?**

Answer:

1. People can share foods, ideas, music, stories, inventions and traditions with others.
 2. Such sharing allows different cultures to learn from and inspire one another.
16. **How can the idea of *Vasudhaiva Kutumbakam* be applied in daily life?**

Answer:

1. We can treat people, animals and nature with respect, care and kindness.
 2. Such behaviour reflects the belief that the whole world is one family.
17. **Why does caring for Earth also mean caring for ourselves?**

Answer:

1. Human beings and nature are connected and depend on the same environment.
 2. Therefore, protecting nature also helps protect human life and well-being.
18. **What could happen if people behaved as though Earth's resources belonged only to them?**

Answer:

1. Such behaviour could reduce the care and protection given to our shared planet.
 2. The chapter teaches that Earth must be protected for ourselves, others and the future.
19. **How are migration and trade similar in connecting different parts of the world?**
- Answer:**
1. Migration moves living beings such as birds between different places, while trade moves products and foods.
 2. Both create connections between distant regions and demonstrate the interconnectedness of Earth.
20. **Why should we protect Earth for future generations?**

Answer:

1. Earth supports people, animals and plants and is our shared home.
2. Protecting it today ensures that those who come after us can also benefit from this precious home.

10.9. Three-mark questions with Answers of LOTS Type: (15 Questions)

Three-Mark Descriptive Questions with Answers — LOTS Type:

1. What do we learn about Earth when we look at it from space?

Answer:

1. From space, Earth looks tiny and smaller details such as cities and villages cannot be seen.
2. We can mainly see the broad shapes of land masses and the sea.
3. Borders between countries are not visible from far above.

2. Explain how people around the world are connected.

Answer:

1. People are connected through nature, trade, travel and shared responsibility for the planet.
2. Clothes, food and toys may come from different parts of the world.
3. Ideas, food, music, stories and inventions are also shared among people.

3. Describe the journey of rosy starlings to India.

Answer:

1. Rosy starlings travel thousands of kilometres every winter.
2. They come from southern Russia, Mongolia and nearby countries to India.
3. They enjoy India's warm weather and feed on locusts and grasshoppers.

4. How do rosy starlings help farmers?

Answer:

1. Rosy starlings feed on insects such as locusts and grasshoppers.
2. These insects are pests that can damage crops.
3. By eating these pests, rosy starlings help farmers protect their crops.

5. What does the chapter tell us about the history and purpose of yoga?

Answer:

1. Yoga has been practised in India for more than 3,000 years.
2. It helps people keep their bodies healthy and their minds peaceful.

3. It was also a way of living in harmony with oneself and nature.

6. How did yoga spread from India to the rest of the world?

Answer:

1. Travellers, scholars and teachers from India shared yoga with the world.
2. People in other countries gradually began to learn and practise it.
3. Today, yoga is practised in almost every country.

7. Describe the journey of chillies from South America to India.

Answer:

1. Chilli plants were originally found in South America.
2. About 400–500 years ago, Portuguese travellers brought chillies to India.
3. Chillies adapted to the new soil and climate and became an important part of Indian kitchens.

8. Explain the sweet story of sugar given in the chapter.

Answer:

1. In India, the method of making jaggery from sugarcane juice was discovered.
2. Over time, people found a way to turn jaggery into sugar.
3. This knowledge and technique later spread to other parts of the world through trade and travel.

9. Describe the journey of the Mexican marigold to India.

Answer:

1. The marigold flower originally came from Mexico.
2. It travelled across the world and eventually reached India.
3. Today, marigolds are widely used in Indian temples, homes, weddings and festivals such as Diwali.

10. What does the chapter tell us about Indian cows in Brazil?

Answer:

1. Portuguese traders took some Indian cows to Brazil long ago.
2. The cows were strong, gave good milk and adapted well to the weather there.
3. Gir, Kankrej and Ongole are the three Indian cow breeds mentioned as important in Brazil.

11. Explain the meaning of the “Web of Life.”

Answer:

1. Earth is a living web where people, animals, plants and ideas are connected.
2. They travel, mix and grow together across different parts of the world.
3. Learning, sharing and caring for one another strengthen these connections.

12. What does *Vasudhaiva Kutumbakam* teach us?

Answer:

1. *Vasudhaiva Kutumbakam* means “the world is one family.”
2. People, animals, trees, rivers, air and the sky are all part of this shared family.
3. It teaches us to live with respect, care and love for one another and for Earth.

13. Why is Earth special?

Answer:

1. Earth is the only planet we know that has life.
2. It has supported people, animals and plants for thousands of years.
3. Earth is our shared home and needs our care and protection.

14. Name three ways in which things have travelled between India and other parts of the world.

Answer:

1. Chillies travelled from South America to India.
2. Marigolds travelled from Mexico to India.

3. Sugar-making knowledge travelled from India to other parts of the world.

15. Why should we care for and protect Earth?

Answer:

1. Earth supports people, animals and plants and is our common home.
2. Caring for Earth means caring for each other because all living beings are connected.
3. We must protect Earth for ourselves, others and the future.

10.10. Three-mark questions with Answers of HOTS Type: (15 Questions)**Three-Mark Descriptive Questions with Answers — HOTS Type:****1. Suppose rosy starlings stopped migrating to India. How might this affect farmers and nature?**

Answer:

1. The number of locusts and grasshoppers in crop fields might increase.
2. Farmers could lose the natural pest-control benefit provided by rosy starlings.
3. This shows that the movement of animals can play an important role in maintaining connections within nature.

2. How does the migration of rosy starlings support the statement “nature has no boundaries”?

Answer:

1. Rosy starlings travel thousands of kilometres from Russia, Mongolia and nearby countries to India.
2. They cross human-made national boundaries during their seasonal journey.
3. Their migration demonstrates how deeply nature is connected across the world.

3. If yoga had remained only in India, how would the world have been different?

Answer:

1. People in other countries might not have learned this Indian practice in the same way.
2. They would have had less opportunity to experience yoga as a practice for a healthy body and peaceful mind.
3. Its worldwide spread shows how sharing useful practices can connect people across cultures.

4. Imagine chillies had never been brought to India. How might Indian food be different today?

Answer:

1. Many Indian dishes would not have the chilli-based spiciness that is common today.
2. People might have continued using more black pepper to make their food spicy.
3. This shows how the arrival of a plant from another land can influence a country's cuisine.

5. How do the journeys of chilli and sugar demonstrate two-way cultural exchange?

Answer:

1. Chillies travelled from South America to India and became part of Indian cuisine.
2. The knowledge and technique of making sugar travelled from India to other parts of the world.
3. Together, these examples show that countries both receive from and contribute to other cultures.

6. Why can the food on your plate be considered evidence that the world is interconnected?

Answer:

1. Foods such as potatoes, tomatoes, peanuts and cashews travelled long distances before becoming common in India.

2. Rice, mangoes and bananas from India also travelled to other lands.
3. Therefore, an everyday meal can contain ingredients whose histories connect different parts of the world.

7. What can we learn from the Mexican marigold becoming an important part of Indian celebrations?

Answer:

1. The marigold originated in Mexico but later found a new home in India.
2. Indians adopted it for temples, homes, weddings and festivals such as Diwali.
3. This shows how something from another land can gradually become an important part of a new culture.

8. What does the success of Indian cow breeds in Brazil teach us about the movement of animals?

Answer:

1. Indian cows taken to Brazil were able to live successfully in their new environment.
2. Their strength, milk production and suitability to the weather made them useful there.
3. This demonstrates how animals moving from one region to another can become important to their new home.

9. How would you explain the idea of the “Web of Life” using examples from the chapter?

Answer:

1. Birds such as rosy starlings connect distant regions through migration.
2. Foods, plants, animals and practices such as chilli, marigold, cows and yoga also travel between countries.
3. These examples show that people, animals, plants and ideas form an interconnected web across Earth.

10. How can a student practise *Vasudhaiva Kutumbakam* in everyday life?

Answer:

1. A student can respect and care for people even when they have different languages, customs or backgrounds.
2. The student can also show kindness towards animals, plants and the natural environment.
3. Such actions reflect the idea that the whole world is one family sharing the same Earth.

11. Why should environmental problems be considered a shared responsibility?

Answer:

1. Air, water, clouds, seeds and animals can move freely across human-made boundaries.
2. Therefore, changes affecting nature in one place can be relevant beyond that particular region.
3. Since Earth is our shared home, caring for the planet requires people to act with shared responsibility.

12. If people stopped sharing ideas, foods and traditions, how might human societies be affected?

Answer:

1. People would have fewer opportunities to learn about useful ideas and practices from other cultures.
2. Foods, music, stories and inventions would have fewer opportunities to become shared across communities.
3. The chapter's examples show that sharing and exchange enrich connections among people.

13. Why does protecting Earth today matter to people who will live in the future?

Answer:

1. Earth supports people, animals and plants and is the only planet we know that has life.

2. Damage to our shared home can affect the living beings that depend upon it.
3. Therefore, protecting Earth today helps preserve it for future generations.

14. How are migration, trade and travel different ways of connecting the world?

Answer:

1. Migration allows animals such as rosy starlings to move naturally between distant regions.
2. Trade and travel help foods, objects, knowledge and ideas move between people and countries.
3. Together, they demonstrate that different parts of Earth are closely connected.

15. A child says, “What happens in another country has nothing to do with us.” How would you respond using the chapter?

Answer:

1. Birds, plants, foods, animals and ideas regularly travel between different countries.
2. Many things we use or enjoy today have come from other parts of the world, while India has also shared many things with others.
3. Therefore, the chapter shows that countries and people are connected rather than completely separate.

10.11 Five-mark questions with Answers of LOTS Type: (10 Questions)

Five-Mark Descriptive Questions with Answers — LOTS Type:

1. Explain the story of the travelling rosy starlings.

Answer:

1. Rosy starlings are pink and black birds that fly in large groups.
2. Every winter, they travel thousands of kilometres from southern Russia, Mongolia and nearby countries to India.
3. They enjoy the warm weather in India.
4. They feed on locusts and grasshoppers and thereby help farmers by eating crop pests.
5. Their journey shows how deeply nature is connected across the globe.

2. Describe yoga as India's gift to the world.

Answer:

1. Yoga has been practised in India for more than 3,000 years.
2. It was practised to keep the body healthy and the mind peaceful.
3. It also helped people live in harmony with themselves and nature.
4. Travellers, scholars and teachers from India shared yoga with people around the world.
5. Today, yoga is practised in almost every country, and 21 June is observed as the International Day of Yoga.

3. Describe the journey of chillies from South America to India.

Answer:

1. Long ago, chilli plants were found only in South America.
2. About 400–500 years ago, Portuguese travellers brought chillies from South America to India.
3. Chillies found new soil and a new climate in India.
4. Indians liked chillies, and they gradually became an important part of Indian kitchens.
5. Before chillies arrived, people in India used black pepper to spice their food.

4. Explain the “Sweet Story of Sugar” given in the chapter.

Answer:

1. Long ago, people in many parts of the world used honey and other naturally sweet things to sweeten their food.
2. In India, the method of making jaggery from sugarcane juice was first discovered.

3. Over time, people found a way to make sugar from jaggery.
4. This knowledge and technique spread to other parts of the world through trade and travel.
5. Rice, mangoes and bananas from India also travelled to other lands and are enjoyed around the world today.

5. Describe the journey and importance of the Mexican marigold in India.

Answer:

1. The marigold flower originally came from Mexico.
2. In Mexican culture, marigolds are special flowers used during festivals.
3. The marigold travelled across the world and eventually reached India.
4. Indians loved its bright orange and yellow colours associated with warmth, celebration and spirituality.
5. Today, marigolds are widely used in Indian temples, homes, weddings and festivals such as Diwali.

6. Explain the story of Indian cows that went to Brazil.

Answer:

1. Long ago, Portuguese traders took some Indian cows to Brazil.
2. These cows were strong, gave good milk and adapted well to Brazil's weather.
3. Over time, the number of these cows increased in Brazil.
4. The chapter identifies Gir, Kankrej and Ongole as three important Indian cow breeds there.
5. These cows became so important that their pictures are even found on Brazilian stamps and coins.

7. Explain how people and different parts of the world are connected.

Answer:

1. Nature connects the world because air, water, clouds, seeds and animals move freely.
2. People are connected through trade and travel.
3. Clothes, food and toys used by people may come from different parts of the world.
4. Ideas, food, music, stories and inventions are also shared among people.
5. These connections remind us that Earth is our shared home.

8. Explain the idea of the “Web of Life.”

Answer:

1. The stories in the chapter are about birds, plants, objects, people, journeys and the blending of cultures.
2. People may speak different languages or play different games, but they learn from and inspire one another.
3. Birds, seeds and practices such as yoga can travel across different parts of the world.
4. Earth is a living web in which people, animals, plants and ideas travel, mix and grow together.
5. By learning, sharing and caring for one another and the planet, we become part of this connection.

9. Explain the meaning and message of *Vasudhaiva Kutumbakam*.

Answer:

1. *Vasudhaiva Kutumbakam* is an ancient Indian saying meaning “**the world is one family.**”
2. People, animals, trees, rivers, air and the sky are all members of this family.
3. We live together, depend on one another and share the same Earth.
4. The saying teaches us to live with respect, care and love for one another and for Earth.
5. It reminds us that caring for Earth means caring for our shared family.

10. Why is Earth our shared home, and why should we protect it?

Answer:

1. Earth is the only planet we know that has life.
2. It has supported people, animals and plants for thousands of years.
3. All living beings depend on Earth and share it as their common home.
4. When we care for Earth, we are also caring for one another.
5. Earth is a gift that we must protect for ourselves, others and the future.

10.12 Five-mark questions with Answers of HOTS Type: (10 Questions)**Five-Mark Descriptive Questions with Answers — HOTS Type:**

1. Imagine rosy starlings stopped migrating to India. Analyse how this could affect farmers and the natural connection between regions.

Answer:

1. Rosy starlings eat locusts and grasshoppers that can harm crops.
2. Without these birds, farmers might lose this natural form of pest control.
3. Their absence could therefore affect the relationship between birds, insects and farming.
4. Their migration also connects India naturally with Russia, Mongolia and nearby regions.
5. Thus, protecting migratory birds helps preserve the interconnected “web of life” described in the chapter.

2. “Yoga is an example of how ideas can connect the world.” Justify this statement.

Answer:

1. Yoga has been practised in India for more than 3,000 years.
2. Travellers, scholars and teachers carried the practice from India to other countries.
3. People from different cultures accepted yoga because of its value for a healthy body and peaceful mind.
4. Today, yoga is practised in almost every country, showing how a useful practice can cross cultural and national boundaries.
5. Its worldwide spread demonstrates how sharing knowledge can bring people from different parts of the world closer together.

3. Suppose chillies had never been brought to India. How might Indian food and culture have been different?

Answer:

1. Many Indian dishes might not have developed the chilli-based spiciness that is common today.
2. People might have continued using more black pepper to make food spicy.
3. A plant from South America would not have become such a familiar ingredient in Indian kitchens.
4. This would have changed part of the food culture that developed after chillies arrived.
5. The example shows how the movement of plants can influence the food habits and culture of another country.

4. Compare the journeys of chilli and sugar and explain what they teach us about global exchange.

Answer:

1. Chillies originated in South America and were brought to India by Portuguese travellers.
2. In contrast, the knowledge and technique of making sugar developed in India and spread to other parts of the world.
3. India therefore received an important food ingredient from elsewhere while also sharing its own knowledge with others.

4. Trade and travel made these exchanges possible across distant regions.
5. These journeys show that cultures influence one another through the exchange of foods, knowledge and practices.

5. How does the journey of the Mexican marigold demonstrate cultural blending?

Answer:

1. Marigolds originated in Mexico, where they have cultural importance during festivals.
2. The flowers later travelled across the world and reached India.
3. Indians appreciated their bright colours and associated them with warmth, celebration and spirituality.
4. Marigolds eventually became common in Indian temples, homes, weddings and festivals such as Diwali.
5. Their journey shows how something from one culture can be accepted and become meaningful in another culture.

6. What can we infer from the success of Indian cow breeds in Brazil?

Answer:

1. Portuguese traders took Indian cows to Brazil, where the animals adapted successfully.
2. Their strength, good milk production and suitability to Brazil's weather made them valuable there.
3. Gir, Kankrej and Ongole became important Indian breeds in Brazil.
4. Their importance is reflected in their appearance on Brazilian stamps and coins.
5. This example demonstrates how animals moving from one part of the world to another can become valuable in their new environment.

7. “Our meals are like world travellers.” Explain this statement using examples from the chapter.

Answer:

1. Many foods that are common in India today originally came from other parts of the world.
2. Chillies came from South America, while potatoes, tomatoes, peanuts and cashews also travelled long distances to India.
3. At the same time, foods such as rice, mangoes and bananas from India travelled to other lands.
4. As a result, an ordinary meal can contain ingredients connected with several regions of the world.
5. Our meals therefore demonstrate how trade, travel and cultural exchange have connected people across the globe.

8. How do the different stories in the chapter prove that Earth is a “Web of Life”?

Answer:

1. Rosy starlings connect distant regions through their seasonal migration.
2. Chillies, marigolds and other plants show how plant life can move and become part of new cultures.
3. Indian cows in Brazil demonstrate the movement and adaptation of animals.
4. Yoga and sugar-making show that ideas, practices and knowledge can also travel across the world.
5. Together, these examples demonstrate that people, animals, plants and ideas are interconnected on our shared Earth.

9. How can the principle of *Vasudhaiva Kutumbakam* guide our behaviour towards people and nature?

Answer:

1. *Vasudhaiva Kutumbakam* teaches us to consider the whole world as one family.

2. Therefore, we should respect people even when their languages, customs or cultures are different from ours.
3. We should also care for animals, plants, rivers, air and other parts of nature.
4. Recognising our dependence on one another encourages cooperation rather than separation.
5. Living with respect, care and love for people and Earth puts the principle of *Vasudhaiva Kutumbakam* into practice.

10. A student says, “Protecting Earth is someone else's responsibility.” How would you use the chapter to change the student's view?

Answer:

1. Earth is our shared home and supports people, animals and plants.
2. All living beings depend on the same natural world and are part of one interconnected family.
3. The chapter explains that caring for Earth is also a way of caring for one another.
4. Therefore, every person has a role in respecting and caring for the planet.
5. Protecting Earth is a shared responsibility because it must remain safe for ourselves, others and the future.

10.13 Five-mark questions with Answers of Applied Type: (10 Questions)

Five-Mark Descriptive Questions with Answers — Applied Type:

1. Your school notices many migratory birds visiting a nearby wetland during winter. What actions can students take to protect these birds and their habitat?

Answer:

1. Students can observe the birds from a safe distance without disturbing or chasing them.
2. They can help keep the wetland clean by preventing littering and encouraging proper waste disposal.
3. They can create awareness among classmates about the importance of migratory birds and their long journeys.
4. They can prepare posters or maps showing where the birds come from and how nature connects different regions.
5. By protecting the birds and their habitat, students can help maintain the interconnected **web of life** described in the chapter.

2. Imagine your class is organising an “Earth—Our Shared Home” exhibition. How would you demonstrate that different parts of the world are connected?

Answer:

1. We can display a globe showing the journey of rosy starlings from Russia and Mongolia to India.
2. We can trace the journey of chillies from South America to India.
3. We can display pictures showing how marigolds travelled from Mexico and became part of Indian celebrations.
4. We can present examples such as yoga and sugar-making knowledge that travelled from India to other parts of the world.
5. These displays would demonstrate how **nature, trade, travel, food and ideas connect people across Earth.**

3. You are asked to prepare a “World Food Plate” using ideas from the chapter. How would you explain the global connections represented on your plate?

Answer:

1. I would include foods containing chillies because chillies travelled from South America to India.

2. I could include potatoes or tomatoes because these foods also travelled long distances before becoming common in India.
3. I could include rice because the chapter explains that rice from India travelled to other lands.
4. I would explain that trade and travel allowed foods and flavours to move between different parts of the world.
5. The plate would therefore demonstrate why the chapter describes our meals as “**world travellers.**”

4. A new student from another country joins your class. How can you apply *Vasudhaiva Kutumbakam* while welcoming the student?

Answer:

1. I would welcome the student warmly and treat them as a member of our school family.
2. I would respect their language, food, customs and traditions even if they are different from mine.
3. I would help the student understand classroom routines and make new friends.
4. I would also try to learn something about their culture and share something about my own culture.
5. These actions apply *Vasudhaiva Kutumbakam* because it teaches us that “**the world is one family.**”

5. Your teacher asks you to identify five things at home that may have connections with other parts of the world. How would you complete this activity?

Answer:

1. I would examine foods, clothes, toys and other objects used in my home.
2. I would ask my parents or elders where some of these items or ingredients originally came from.
3. I could investigate foods such as potatoes, tomatoes, peanuts or cashews mentioned in the chapter.
4. I would mark their places of origin and journeys on a map or globe.
5. This activity would help me understand how our everyday lives are connected with different parts of the world through trade and travel.

6. Suppose you have to organise an International Day of Yoga programme in your school. How would you use the chapter's ideas in the programme?

Answer:

1. I would explain that yoga has been practised in India for more than 3,000 years.
2. I would tell students that yoga helps keep the body healthy and the mind peaceful.
3. I would organise a simple group yoga session suitable for students.
4. I would explain that **21 June** is observed as the International Day of Yoga and that people around the world practise yoga.
5. The programme would show how an ancient Indian practice has become a shared practice connecting people globally.

7. Your family is preparing for a festival using marigold flowers. How would you connect this experience with what you learned in the chapter?

Answer:

1. I would explain to my family that the marigold originally came from Mexico.
2. It travelled across the world and eventually found a new home in India.
3. Indians came to value its bright orange and yellow colours for warmth, celebration and spirituality.
4. Today, marigolds are commonly used in Indian homes, temples, weddings and festivals such as Diwali.

- Our use of marigolds therefore shows how something from another land can become an important part of a new culture.

8. Your class wants to practise the message “Earth is our shared home.” Suggest five actions students can take.

Answer:

- Students can keep their classrooms, school grounds and surroundings clean.
- They can care for plants, animals and other living things around them.
- They can avoid wasting resources and encourage others to care for the environment.
- They can respect people from different places and cultures as members of one human family.
- Through such actions, students can practise the chapter's message of caring for **one another and the Earth we all share**.

9. You have been asked to maintain a “Seasons' Journal” for your neighbourhood. What five things would you observe?

Answer:

- I would observe **plant life**, including flowering, fruiting, new growth and changes in leaves.
- I would record the **birds, animals and insects** I see and what they are doing.
- I would observe **air, heat and light**, including weather conditions and changes in the sky.
- I would record changes in **water and water bodies**, such as rainfall, water levels and cleanliness.
- I would observe **human activities**, including clothing, seasonal foods, festivals, planting and harvesting.

10. Your friend says, “Things from other countries have no connection with our daily life.” Using examples from the chapter, how would you explain otherwise?

Answer:

- I would explain that chillies came from South America but are now widely used in Indian kitchens.
- Marigolds came from Mexico but are now common in Indian festivals and celebrations.
- Potatoes, tomatoes, peanuts and cashews also travelled long distances before becoming part of our food.
- Similarly, India shared yoga, sugar-making knowledge and other things with the wider world.
- These examples prove that our daily lives are connected with other countries through **nature, trade, travel and cultural exchange**.

10.14 Multiple Choice Questions with answers for Olympiad type Competitive Exams:

Olympiad-Type Multiple Choice Questions with Answers:

These questions include **conceptual understanding, reasoning, application, inference, cause-and-effect, and assertion-based thinking**, while remaining grounded in the chapter.

1. When Earth is viewed from far above, which observation best supports the idea that it is our shared home?

- Every country has a different colour
- Political borders are clearly visible
- Broad land masses and seas are visible, but national borders are not
- Every city can be identified

Answer: C) Broad land masses and seas are visible, but national borders are not

2. Which of the following BEST explains the statement “Nature has no boundaries”?

- A) All countries have the same climate
- B) Air, water, clouds, seeds and animals can move across regions
- C) Every country has the same plants
- D) People cannot create borders

Answer: B) Air, water, clouds, seeds and animals can move across regions

3. A farmer notices fewer locusts and grasshoppers after rosy starlings arrive. What is the most logical explanation?

- A) The birds frighten farmers
- B) The birds eat these crop pests
- C) The birds change the climate
- D) The insects migrate to Russia

Answer: B) The birds eat these crop pests

4. Rosy starlings travelling from Russia and Mongolia to India mainly demonstrate:

- A) industrial development
- B) political cooperation
- C) natural interconnectedness
- D) urbanisation

Answer: C) natural interconnectedness

5. Which sequence correctly represents the journey of rosy starlings described in the chapter?

- A) India → Mexico
- B) Brazil → India
- C) Russia/Mongolia → India
- D) India → South America

Answer: C) Russia/Mongolia → India

6. Why is yoga an appropriate example of India's connection with the world?

- A) It originated outside India and disappeared
- B) It was practised only by travellers
- C) An ancient Indian practice spread to countries around the world
- D) It is practised only on 21 June

Answer: C) An ancient Indian practice spread to countries around the world

7. Which combination correctly describes the purpose of yoga mentioned in the chapter?

- A) Healthy body + peaceful mind
- B) Fast travel + strong memory
- C) Better farming + more rainfall
- D) Trade + transportation

Answer: A) Healthy body + peaceful mind

8. Which event occurred in 2014 according to the chapter?

- A) Chillies were brought to India
- B) The United Nations declared 21 June as the International Day of Yoga
- C) Marigolds first reached India
- D) Sugar was first made

Answer: B) The United Nations declared 21 June as the International Day of Yoga

9. If chillies had never reached India, which ingredient mentioned in the chapter would most likely have continued to be used more for spiciness?

- A) Sugar
- B) Cardamom
- C) Black pepper

D) Jaggery

Answer: C) Black pepper

10. Which sequence correctly shows the journey of chilli?

A) India → South America → Portugal

B) South America → Portugal → India

C) Mexico → India → Brazil

D) Russia → India → Portugal

Answer: B) South America → Portugal → India

11. Which group contains only foods mentioned as having travelled a long way before becoming common in India?

A) Potatoes, tomatoes, peanuts and cashews

B) Rice, wheat, mangoes and bananas

C) Sugar, honey, rice and pepper

D) Mangoes, bananas, rice and jaggery

Answer: A) Potatoes, tomatoes, peanuts and cashews

12. Chillies travelled to India, while sugar-making knowledge travelled from India to the world. What does this BEST demonstrate?

A) Countries develop without outside influence

B) Exchange between cultures can occur in both directions

C) Only plants can travel between countries

D) Trade always changes the climate

Answer: B) Exchange between cultures can occur in both directions

13. Why does the chapter describe our meals as “world travellers”?

A) People eat only while travelling

B) Every meal is prepared in another country

C) Foods and flavours have travelled between different parts of the world

D) All food comes from South America

Answer: C) Foods and flavours have travelled between different parts of the world

14. Which pair is correctly matched?

A) Marigold — Russia

B) Chilli — South America

C) Rosy starling — Mexico

D) Yoga — Brazil

Answer: B) Chilli — South America

15. A student sees marigolds decorating an Indian temple. Which fact from the chapter makes this especially interesting?

A) Marigolds originally came from Mexico

B) Marigolds originally came from Russia

C) Marigolds can grow only in India

D) Marigolds were developed from sugarcane

Answer: A) Marigolds originally came from Mexico

16. What can be inferred from marigolds becoming common in Indian festivals?

A) Cultures never accept things from elsewhere

B) Plants cannot acquire cultural importance

C) Something from another land can become part of a new culture

D) All Indian festival flowers came from Mexico

Answer: C) Something from another land can become part of a new culture

17. Gir, Kankrej and Ongole are connected in the chapter because they are:

A) migratory birds

B) Indian cow breeds important in Brazil

- C) varieties of marigolds
- D) types of Indian spices

Answer: B) Indian cow breeds important in Brazil

18. Indian cows becoming successful in Brazil mainly demonstrates that:

- A) animals can sometimes adapt successfully to a new environment
- B) animals never move between countries
- C) only plants can survive in new climates
- D) Brazil and India have identical environments

Answer: A) animals can sometimes adapt successfully to a new environment

19. Consider the following:

- I. Rosy starlings migrate between regions.
- II. Chillies travelled to India.
- III. Yoga spread from India to the world.
- IV. Marigolds travelled from Mexico to India.

Which conclusion is BEST supported by all four examples?

- A) Only animals connect countries
- B) Only trade connects countries
- C) Living things, foods and ideas can connect distant parts of Earth
- D) Every cultural practice originated in India

Answer: C) Living things, foods and ideas can connect distant parts of Earth

20. Which statement BEST describes the “Web of Life”?

- A) Every living thing exists independently
- B) People, animals, plants and ideas are interconnected
- C) Only humans influence Earth
- D) Countries should remain completely separate

Answer: B) People, animals, plants and ideas are interconnected

21. *Vasudhaiva Kutumbakam* is most closely associated with which idea?

- A) Every country is a separate world
- B) The world is one family
- C) Humans are more important than nature
- D) Only people from the same culture are connected

Answer: B) The world is one family

22. Which action BEST represents *Vasudhaiva Kutumbakam*?

- A) Respecting only people from one's own region
- B) Caring for people but ignoring nature
- C) Showing respect and care for people, animals and the Earth
- D) Avoiding people with different traditions

Answer: C) Showing respect and care for people, animals and the Earth

23. Which statement gives the BEST reason for protecting Earth?

- A) Earth belongs only to the present generation
- B) Earth supports life and is our shared home
- C) Earth contains political borders
- D) Only humans depend on Earth

Answer: B) Earth supports life and is our shared home

24. Assertion (A): Caring for Earth means caring for ourselves.

Reason (R): Humans and nature are connected and must live in harmony.

- A) Both A and R are true, and R correctly explains A
- B) Both A and R are true, but R does not explain A
- C) A is true, but R is false
- D) A is false, but R is true

Answer: A) Both A and R are true, and R correctly explains A

25. Which of the following provides the BEST overall message of the chapter?

- A) Every country should depend only on itself
- B) Humans should control all other living things
- C) Earth is interconnected, and we should learn, share and care for our common home
- D) Only trade connects different parts of the world

Answer: C) Earth is interconnected, and we should learn, share and care for our common home

Answer Key:

1-C | 2-B | 3-B | 4-C | 5-C | 6-C | 7-A | 8-B | 9-C | 10-B | 11-A | 12-B | 13-C | 14-B | 15-A | 16-C | 17-B | 18-A | 19-C | 20-B | 21-B | 22-C | 23-B | 24-A | 25-C

10.15 Best Practices Opportunity List from the Chapter: (10 Ideas)

“Best Practices” Opportunities for Teaching:

The chapter strongly supports **activity-based and experiential learning**, including the use of globes, journey tracing, observation, interviews, discussions, and a seasonal journal.

- (1) **Globe and Map-Based Learning:** Use a globe or world map to let students locate India, Russia, Mongolia, South America, Mexico and Brazil. Students can trace the journeys of rosy starlings, chillies, marigolds and other examples using coloured strings. This develops geographical awareness while making the idea of a connected Earth visible.
- (2) **Story-Based Concept Teaching:** Teach concepts through the chapter's stories—*The Travelling Birds*, *Yoga—India's Gift to the World*, *Chilli*, *Sugar*, *Mexican Marigold*, and *Indian Cows in Brazil*. After each story, ask students to identify **what travelled, from where, to where, and what the journey teaches us**.
- (3) **Think–Pair–Share Discussions:** Use questions such as “What does nature has no boundaries mean?”, “Why did yoga become popular worldwide?” and “Why are our meals like world travellers?” Students first think individually, discuss with a partner, and then share with the class. This encourages every child to participate rather than relying only on a few students.
- (4) **Home-to-World Connection Activity:** Ask students to identify five things in their home or school that may have originated in another part of the world and investigate their origins. This connects textbook learning with children's everyday experiences and demonstrates the role of trade, travel and cultural exchange.
- (5) **Learning Through Local Nature Observation:** Encourage students to observe migratory birds, plants, insects, weather and water bodies in their surroundings. They can maintain simple observation notes or drawings and compare changes across seasons, following the chapter's **Seasons' Journal** approach.
- (6) **Intergenerational Learning:** Ask students to interview a grandparent or elderly neighbour about a food, song or custom that was uncommon during their childhood but is common today. Students can investigate where it came from and present their findings to the class.
- (7) **Collaborative “Web of Life” Display:** Create a classroom wall display with pictures of **people, birds, animals, plants, foods, ideas and traditions**. Connect them using threads to visually demonstrate how everything forms a “Web of Life.”
- (8) **Values Integrated with Learning:** Connect *Vasudhaiva Kutumbakam*—“*the world is one family*” with children's daily behaviour. Ask each student to suggest one action

showing **respect for people, kindness towards animals, care for plants, conservation of water, or cleanliness.**

- (9) **Cross-Curricular Integration:** Integrate the chapter with **Geography** through maps, **Science/EVS** through migration and environmental care, **Mathematics** through distances and timelines, **Art** through posters, and **Languages** through postcards and short stories. This helps students understand that the chapter's central idea of interconnectedness applies across subjects.
- (10) **Reflection and Action for Earth:** End the chapter with an **“I Care for Earth” pledge or action card.** Each student writes one practical action they will follow—such as saving water, avoiding littering, caring for plants or protecting birds—and later reflects on whether they followed it. This turns the chapter's message of protecting our shared home into everyday practice.

10.16 Innovations Opportunity List from the Chapter: (10 Ideas)

“Innovations” Opportunities in Teaching–Learning for 5th Standard:

The chapter offers excellent opportunities for **creative, technology-supported, experiential and collaborative learning**, especially around migration, global exchange, the “Web of Life,” *Vasudhaiva Kutumbakam*, and environmental responsibility.

- (1) **Interactive “Journey Across the World” Digital Map:** Create a simple interactive world map where students trace the journeys of **rosy starlings, chillies, marigolds, yoga and Indian cows.** Clicking or pointing to each location can reveal a picture and a short fact. This transforms geographical movement into a visual learning experience.
- (2) **QR-Code Global Connections Gallery:** Create classroom QR codes for different chapter topics such as **Yoga, Rosy Starlings, Chilli, Sugar, Marigold and Indian Cow Breeds.** Students can scan each station and complete a small “From–To–What I Learned” card. The chapter itself introduces the idea of digital location through **DIGIPIN**, making this a suitable technology connection.
- (3) **“Passport of a Traveller” Creative Project:** Give each student an imaginary passport for one travelling item—such as a **chilli, marigold, rosy starling or yoga.** Students add the places it travelled, drawings, stamps and a short description of what happened at each destination. This creatively reinforces how plants, animals and ideas cross boundaries.
- (4) **Living Web of Life Simulation:** Students can represent **people, plants, animals, food, water, air and ideas** while holding strings connecting themselves to one another. When one student moves or releases a string, the class can observe how the “web” is affected. This provides a physical model of the chapter's concept that Earth is a living web in which everything is interconnected.
- (5) **“World on My Plate” Investigation:** Students photograph, draw or list ingredients from one meal at home and investigate which ingredients have connections with different parts of the world. They can then create a **food-origin map** showing how an ordinary meal represents global connectedness. This extends the chapter's idea that our meals are like “world travellers.”
- (6) **Role-Play: “I Travelled to India!”:** Students can become a **chilli from South America, marigold from Mexico, rosy starling from Russia/Mongolia, or Indian cow travelling to Brazil.** Each child narrates their journey in the first person—“I started from..., I travelled to..., and I became important because...”. This combines EVS learning with language, drama and communication skills.
- (7) **Student-Generated Mini Documentary:** Small groups can create a 1–2 minute classroom video titled **“Earth—Our Shared Home.”** They can use drawings, maps,

narration and role-play to explain one example of global interconnectedness. The videos can be screened as a class learning festival.

- (8) **Digital Seasons Journal:** Instead of maintaining only a written journal, students can take periodic photographs or make digital drawings of the **same place** and record changes in plants, birds, animals, weather, water and human activities. At the end of the term, they can compare the observations as a visual timeline. This directly extends the chapter's Seasons' Journal activity.
- (9) **“Vasudhaiva Kutumbakam” Collaborative World Wall:** Create a large Earth display with the statement **“The World Is One Family.”** Each student adds a leaf, handprint or paper figure containing one action they will take to care for people, animals, plants or the environment. This turns the chapter's value education into a collaborative classroom installation.
- (10) **Earth Problem-Solving Challenge:** Give groups simple real-life situations such as **a polluted pond, litter near a bird habitat, unnecessary water wastage, or lack of care for plants.** Students discuss the problem, propose solutions, and present an “Earth Care Action Plan.” This converts the chapter's message that Earth needs our care into **problem-based and action-oriented learning.**

10.17: Practicing Questions/Question Bank

A. Fill in the Blanks:

- From space, Earth appears like a beautiful _____ planet.
Answer: blue
- A DIGIPIN is a special _____-character code.
Answer: 10
- Rosy starlings travel to India during the _____ season.
Answer: winter
- Rosy starlings feed on _____ and grasshoppers.
Answer: locusts
- Yoga has been practised in India for more than _____ years.
Answer: 3,000
- The International Day of Yoga is observed on _____.
Answer: 21 June
- Chillies originally came from _____ America.
Answer: South
- Before chillies arrived in India, people commonly used _____ pepper to spice their food.
Answer: black
- The method of making _____ from sugarcane juice was first discovered in India.
Answer: jaggery
- The marigold described in the chapter originally came from _____.
Answer: Mexico
- Gir, Kankrej and Ongole are breeds of Indian _____.
Answer: cows

12. *Vasudhaiva Kutumbakam* means “The world is one _____.”

Answer: family

13. Earth is our _____ home.

Answer: shared

14. People, animals, plants and ideas together form a living _____.

Answer: web

15. Nature does not recognise human-made _____.

Answer: boundaries

These concepts are directly developed through the chapter's examples of natural movement, global exchange and interconnectedness.

B. One-Mark Descriptive Questions:

1. **What is DIGIPIN?**

Answer: DIGIPIN is a digital address represented by a special 10-character code.

2. **From which regions do rosy starlings migrate to India?**

Answer: They migrate from southern Russia, Mongolia and nearby countries.

3. **How do rosy starlings help farmers?**

Answer: They help farmers by eating crop pests such as locusts and grasshoppers.

4. **When is International Day of Yoga observed?**

Answer: International Day of Yoga is observed on **21 June**.

5. **Where did chillies originally come from?**

Answer: Chillies originally came from South America.

6. **Who brought chillies to India?**

Answer: Portuguese travellers brought chillies to India.

7. **What was used to spice Indian food before chillies arrived?**

Answer: Black pepper was used to spice food before chillies arrived.

8. **Where did the marigold described in the chapter originate?**

Answer: It originated in Mexico.

9. **Name any two Indian cow breeds found in Brazil.**

Answer: Gir and Kankrej are two such breeds.

10. **What does *Vasudhaiva Kutumbakam* mean?**

Answer: It means “The world is one family.”

C. Two-Mark Descriptive Questions:

1. **Why are rosy starlings useful to farmers?**

Answer:

1. Rosy starlings eat locusts and grasshoppers.
2. By eating these crop pests, they help farmers protect their crops.

2. Mention two benefits of practising yoga.**Answer:**

1. Yoga helps keep the body healthy.
2. It helps keep the mind peaceful.

3. How did chillies become part of Indian food?**Answer:**

1. Portuguese travellers brought chillies from South America to India about 400–500 years ago.
2. Chillies adapted to Indian soil and climate and gradually became part of Indian kitchens.

4. Give two examples showing that foods travel across the world.**Answer:**

1. Chillies travelled from South America to India.
2. Rice, mangoes and bananas from India travelled to other lands.

5. Why did Indian cow breeds become important in Brazil?**Answer:**

1. Indian cows were strong and gave good milk.
2. They also adapted well to Brazil's weather.

6. Give two examples to show that nature has no boundaries.**Answer:**

1. Air, water and clouds move freely across regions.
2. Seeds and animals can also travel from one place to another.

7. How does trade connect people?**Answer:**

1. Trade allows food, clothes, toys and other things to move between places.
2. It connects people living in different parts of the world.

8. Why should we care for Earth?**Answer:**

1. Earth is our shared home and supports life.
2. We must protect it for ourselves, others and the future.

D. Three-Mark Descriptive Questions:**1. Describe the migration of rosy starlings.****Answer:**

1. Rosy starlings travel thousands of kilometres to India during winter.
2. They come from southern Russia, Mongolia and nearby countries.
3. Their migration shows how nature connects different parts of the world.

2. How did yoga spread from India to the world?

Answer:

1. Yoga has been practised in India for more than 3,000 years.
2. Travellers, scholars and teachers helped spread yoga to other countries.
3. Today, yoga is practised in almost every country.

3. Explain the journey of the Mexican marigold.

Answer:

1. Marigolds originally came from Mexico.
2. They travelled across the world and eventually reached India.
3. Today, they are widely used in Indian temples, homes, weddings and festivals.

4. How does our food show global connectedness?

Answer:

1. Chillies came to India from South America.
2. Potatoes, tomatoes, peanuts and cashews also travelled long distances before becoming common in India.
3. Rice, mangoes and bananas from India travelled to other parts of the world.

5. Explain the idea of the “Web of Life.”

Answer:

1. People, animals, plants and ideas are connected with one another.
2. They travel, mix and grow together across different regions.
3. We strengthen these connections by learning, sharing and caring for one another and Earth.

6. What does *Vasudhaiva Kutumbakam* teach us?

Answer:

1. It means that the whole world is one family.
2. People, animals, trees, rivers, air and the sky are all part of this family.
3. Therefore, we should treat one another and Earth with respect, care and love.

E. Five-Mark Descriptive Questions:

1. Explain how the chapter shows that Earth is our shared home.

Answer:

1. From space, human-made borders between countries are not visible.
2. Nature connects different regions through air, water, plants and animals.
3. Trade and travel connect people and cultures around the world.
4. Food, ideas, music, stories and inventions are shared between people.
5. These connections remind us that all of us share one Earth as our common home.

2. Explain how plants and foods have travelled across the world.**Answer:**

1. Chillies travelled from South America to India.
2. Potatoes, tomatoes, peanuts and cashews also travelled long distances before becoming common in India.
3. Marigolds travelled from Mexico and became important in Indian celebrations.
4. Rice, mangoes and bananas from India travelled to other parts of the world.
5. These journeys demonstrate how trade and travel have connected cultures and food habits.

3. Explain how the journey of Indian cows to Brazil demonstrates global interconnectedness.**Answer:**

1. Portuguese traders took some Indian cows to Brazil.
2. The cows were strong and gave good milk.
3. They adapted successfully to Brazil's weather.
4. Gir, Kankrej and Ongole became important Indian breeds in Brazil.
5. Their story shows how animals from one region can become valuable in another part of the world.

4. Explain the importance of the message *Vasudhaiva Kutumbakam*.**Answer:**

1. *Vasudhaiva Kutumbakam* means “**The world is one family.**”
2. It reminds us that all people are connected.
3. Animals, trees, rivers, air and the sky are also part of our shared family.
4. We should treat people and nature with respect, care and love.
5. Following this principle can help us live together responsibly on our shared Earth.

5. Suggest five actions a student can take to care for our shared Earth.**Answer:**

1. A student can keep the home, school and surroundings clean.
2. Water and other natural resources should be used carefully.

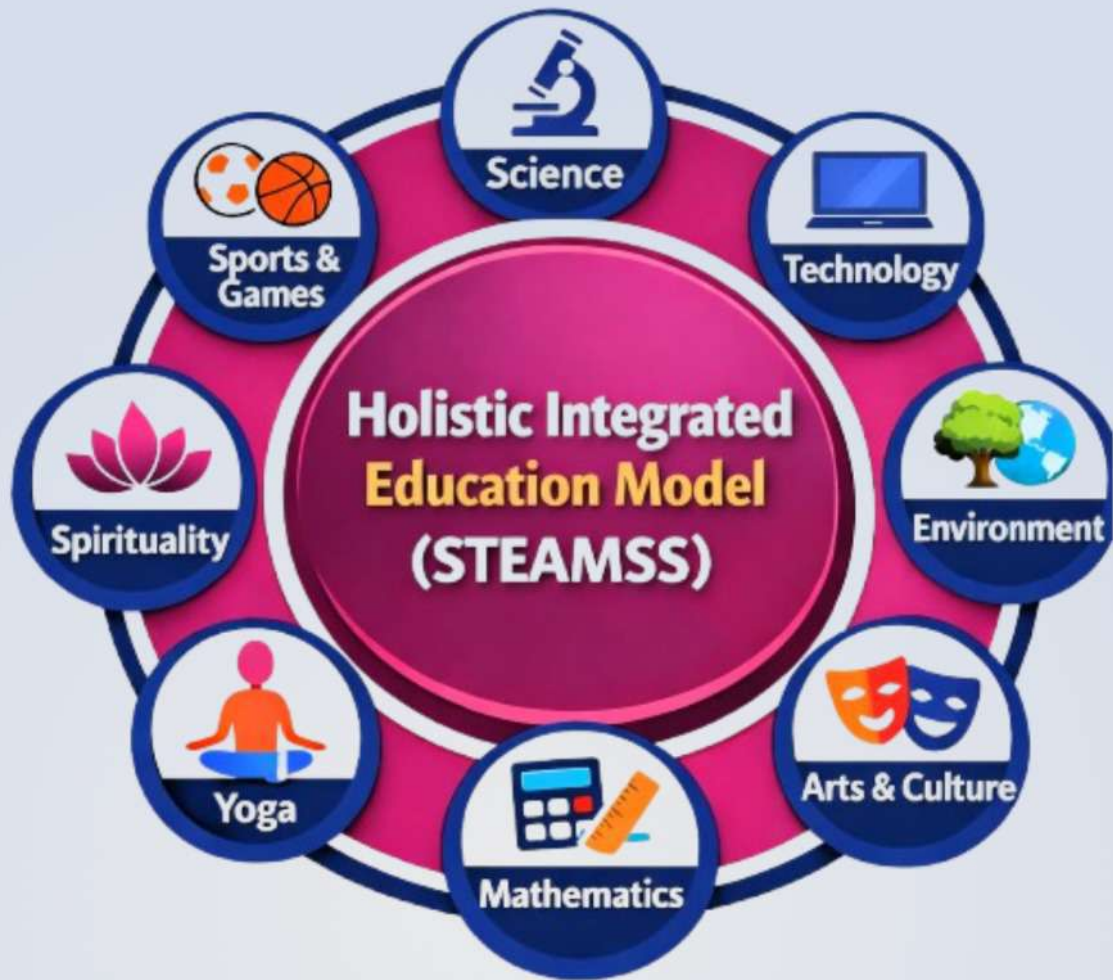
3. Plants, animals and birds should be protected and treated kindly.
4. Students should respect people from different places and cultures.
5. Such responsible actions help protect Earth for ourselves, others and future generations.





ALEVOOR POORNAPRAJNA PUBLIC SCHOOL

(Proposed CBSE Tech School)



Alevoor Poornaprajna Public School (APPS) follows a unique and holistic learning approach that combines Science, Technology, Environment, Arts & Culture, Mathematics, Spiritual practices like Yoga and Meditation, and Sports-based education. This method helps in the overall development of children, including their physical, mental, emotional, social, moral, spiritual, and competitive growth.



Scan to Apply

CONTACT US



9731044005,
9844743573,
9845553341



www.alevoorpps.in



office@alevoorpps.in



admissions@alevoorpps.in

Few Seats are Available in Each Standard