UNIQUE STUDY POINT

By Sumeet Sahu

www.uniquestudyonline.com

Unique Study Point, Amitesh Nagar, Indore, MP | Contact: 8103405051

Class: VI	**Subject:** Science	**Session:** 2025-26
Chapter: 11 - Nature's Treasures	**Time:** 1½ Hours	**Max. Marks:** 40

General Instructions:

1. All questions are compulsory.
2. This question paper contains 20 questions divided into five sections A, B, C, D and E.
3. Section A contains 10 MCQs of 1 mark each.
4. Section B contains 4 questions of 2 marks each.
5. Section C contains 3 questions of 3 marks each.
6. Section D contains 1 question of 5 marks.
7. Section E contains 2 Case Study Based questions of 4 marks each.

SECTION A - Multiple Choice Questions (1 mark each)

1. Moving air is called:
(a) Breeze
(b) Storm
(c) Wind
(d) Oxygen

2. The main source of energy on Earth is:
(a) Fossil fuels
(b) The Sun
(c) Water
(d) Wind

3. World Water Day is observed on:
(a) 22nd March
(b) 5th June
(c) 14th February
(d) 2nd October

4. Which of the following is a non-renewable resource?
(a) Air
(b) Water
(c) Coal
(d) Sunlight

5. Laterite rocks are used as:
(a) Fuel
(b) Building material

(c) Fertilizer
(d) Medicine

6. LPG stands for:
(a) Liquid Petroleum Gas
(b) Liquefied Petroleum Gas
(c) Light Petroleum Gas
(d) Low Petroleum Gas

7. Soil is formed by the disintegration of:
(a) Water
(b) Air
(c) Rocks
(d) Plants

8. Van Mahotsav is celebrated to:
(a) Save water
(b) Plant trees
(c) Conserve energy
(d) Reduce pollution

9. What covers about two-thirds of the Earth's surface?
(a) Land
(b) Water
(c) Forests
(d) Deserts

10. The Chipko movement was started to:
(a) Save water
(b) Prevent cutting of trees
(c) Reduce air pollution
(d) Conserve soil

SECTION B - Short Answer Questions (2 marks each)

11. What is a windmill? How does it work?

12. Differentiate between freshwater and saline water. Which one is suitable for human use?

13. What are natural resources? Give two examples.

14. Why are rocks important? Name two uses of rocks.

SECTION C - Short Answer Questions (3 marks each)

15. Explain how the Sun is the main source of energy for all living beings on Earth.

16. What is water pollution? List three human activities that cause water pollution. How can we prevent it?

17. Describe the process of soil formation. Why is it important to conserve soil?

SECTION D - Long Answer Question (5 marks)

18. Explain the importance of water in our daily life. Why is freshwater considered precious? Discuss three methods of water conservation and explain how each method helps in conserving water.

SECTION E - Case Study Based Questions (4 marks each)

19. Case Study 1: In many parts of India, people have been using traditional methods of water harvesting for centuries. Stepwells, known as Bawadi in Rajasthan and Vav in Gujarat, are built to harvest rainwater and water seeping from nearby water sources. These structures have walls lined with stones that allow water seepage. They not only store rainwater but also help in groundwater recharge.

Based on the above case study, answer the following questions:

(a) What is the purpose of building stepwells? (1 mark)

(b) Name two states where stepwells are commonly found. (1 mark)

(c) How do stepwells help in water conservation and groundwater recharge? (2 marks)

20. Case Study 2: The Muppandal Wind Farm in Tamil Nadu, Jaisalmer Wind Park in Rajasthan, and Brahmanvel Wind Farm in Maharashtra are some of the leading windmill farms in India. These windmill farms have a large number of windmills that use wind energy to generate electricity. Wind energy is a clean and renewable source of energy that does not cause pollution.

Based on the above case study, answer the following questions:

(a) What is a windmill farm? (1 mark)

(b) Name one advantage of using wind energy. (1 mark)

(c) Explain how windmills generate electricity. Why is wind energy considered a renewable resource? (2 marks)

DETAILED ANSWER KEY - PAPER 02

SECTION A - Answers to MCQs

1. (c) Wind

Moving air is called wind. Wind can blow gently as a breeze or strongly during a storm.

2. (b) The Sun

The Sun is the main source of energy on Earth. It provides heat and light essential for all living beings.

3. (a) 22nd March

World Water Day is observed on 22nd March every year to raise awareness about the importance of water conservation.

4. (c) Coal

Coal is a non-renewable resource as it takes millions of years to form and is found in limited quantities.

5. (b) Building material

Laterite rocks are used as building material, similar to bricks, in construction.

6. (b) Liquefied Petroleum Gas

LPG stands for Liquefied Petroleum Gas. It is a cleaner fuel used for cooking and has replaced traditional fuels like coal and wood.

7. (c) Rocks

Soil is formed by the disintegration (breaking apart) of rocks by the actions of the Sun, water, and living organisms over thousands of years.

8. (b) Plant trees

Van Mahotsav is a week-long forest festival celebrated in July to plant trees and raise awareness about respecting forests.

9. (b) Water

Water covers about two-thirds of the Earth's surface, mostly in oceans and seas.

10. (b) Prevent cutting of trees

The Chipko movement started in the early 1970s in Uttarakhand to prevent cutting of trees and save forests. Local women hugged trees to protect them from being felled.

SECTION B - Answers to Short Answer Questions

11. What is a windmill? How does it work?

Windmill: A windmill is a structure with large wings or blades that rotate when wind blows on them.

How it works:

- Wind rotates the wings of a windmill.
- The rotating wings are connected to a mechanism that converts the rotational energy into useful work.

- Windmills can be used to run flour mills, pull up water from wells, or generate electricity.
- In windmill farms, many windmills are installed together to generate large amounts of electricity using wind energy.

12. Differentiate between freshwater and saline water.

Freshwater: Freshwater is water that is not salty. It is found in the form of ice sheets, snow, rivers, lakes, ponds, and underground water.

Saline water: Saline water is salty water found in oceans and seas. It contains dissolved salts.

Which one is suitable for human use: Freshwater is suitable for human use as it can be used for drinking, cooking, bathing, washing, agriculture, and industrial purposes. Saline water is not fit for these activities due to its salt content.

13. What are natural resources? Give two examples.

Natural resources: Natural resources are the resources that we get from nature. They are essential for our survival and for making our lives more comfortable.

Examples:

- Air - We need air for breathing.
- Water - We need water for drinking, cooking, and other purposes.
- Soil - Plants grow in soil.
- Forests - Provide us with timber, fruits, and other products.
- Sunlight - Provides us with heat and light energy.

(Any two examples are acceptable)

14. Why are rocks important? Name two uses of rocks.

Importance of rocks:

- Rocks are the raw material from which soil is formed.
- Rocks contain minerals which are essential for various purposes.
- They play a vital role in human civilization.

Two uses of rocks:

1. **Construction:** Rocks are used in the construction of houses, buildings, temples, roads, and dams.
2. **Roofing and building material:** Rocks like slate are used for roofing, and laterite rocks are used as building material like bricks.
3. **Making tools:** Since ancient times, humans have used rocks to make tools like hand axes and arrowheads.
4. **Decorative purposes:** Marble and granite are used for making table tops and decorative items.

(Any two uses are acceptable)

SECTION C - Answers to Short Answer Questions

15. Explain how the Sun is the main source of energy for all living beings on Earth.

The Sun is the main source of energy for all living beings on Earth in the following ways:

1. **Plants make food:** Plants need sunlight to prepare food through the process of photosynthesis. They use carbon dioxide from the air and water, along with sunlight, to make food (glucose). This process also releases oxygen which is essential for other living beings.
2. **Animals depend on plants:** Animals cannot make their own food. They eat plants to get energy.

Herbivores eat plants directly, while carnivores eat herbivores. Thus, the energy from the Sun is transferred through the food chain.

3. **Humans get food:** We get food from both plants and animals. Whether we eat vegetables, fruits, grains, or meat, the energy ultimately comes from the Sun through plants.
4. **Energy cycle:** The entire cycle on Earth is possible due to the Sun. Plants get energy from the Sun and produce food. Animals eat plants and grow. We get food from both plants and animals. Thus, we all are dependent on the Sun as the main source of energy.

Conclusion: One cannot imagine life on Earth without the Sun. It is the ultimate source of energy that sustains all life forms on our planet.

16. What is water pollution? List three human activities that cause water pollution.

Water pollution: Water pollution is the contamination of water bodies (rivers, lakes, oceans, ponds) by harmful substances, making the water unfit for consumption by living beings.

Three human activities that cause water pollution:

1. **Throwing trash in water bodies:** People throw plastic bags, wrappers, and other waste materials into rivers, lakes, and ponds, polluting the water.
2. **Dumping household waste:** Waste from homes, including sewage and garbage, is often dumped into water sources, contaminating them.
3. **Industrial waste disposal:** Industries discharge harmful chemicals, toxic substances, and untreated waste into rivers and water bodies, severely polluting them.

How to prevent water pollution:

- Do not throw trash or waste into water bodies.
- Ensure proper treatment of household and industrial waste before disposal.
- Industries should use proper waste treatment facilities and avoid discharging harmful substances into water.
- Raise awareness about the importance of keeping water bodies clean.
- Implement strict laws against water pollution and ensure their enforcement.

17. Describe the process of soil formation. Why is it important to conserve soil?

Process of soil formation:

- Soil is formed by the disintegration (breaking apart) of rocks.
- This process happens due to the actions of the Sun, water, and living organisms over a very long time (thousands of years).
- The Sun heats the rocks during the day and they cool at night. This repeated heating and cooling causes cracks in the rocks.
- Water seeps into these cracks and freezes, expanding and breaking the rocks further.
- Wind, rain, and flowing water erode rocks and break them into smaller pieces.
- Living organisms like lichens and mosses grow on rocks and secrete acids that slowly break them down.
- Over thousands of years, these rock fragments mix with decayed plant and animal matter to form soil.

Why is it important to conserve soil:

- **Takes long time to form:** Soil formation is a very slow process that takes thousands of years. Once soil is lost due to erosion or degradation, it cannot be replaced quickly.
- **Essential for plant growth:** Soil provides support, nutrients, water, and air to plants. Without fertile soil, we cannot grow crops and food.
- **Supports biodiversity:** Soil is home to many organisms like earthworms, insects, and microorganisms that play important roles in the ecosystem.
- **Prevents flooding:** Soil absorbs rainwater and prevents flooding. When soil is eroded, this natural

function is lost.
- **Limited resource:** Fertile soil is a limited and precious natural resource that must be protected for future generations.

SECTION D - Answer to Long Answer Question

18. Explain the importance of water. Why is freshwater precious? Discuss three methods of water conservation.

Importance of water in our daily life:

- **Drinking:** Water is essential for our survival. We need to drink water every day to stay alive and healthy.
- **Cooking:** We use water to wash vegetables, cook food, and prepare meals.
- **Bathing and washing:** Water is needed for personal hygiene - bathing, washing hands, brushing teeth, and washing clothes.
- **Cleaning:** We use water to clean our homes, utensils, and surroundings.
- **Agriculture:** Water is essential for growing crops and vegetables. Irrigation depends on water availability.
- **Industrial use:** Industries require large amounts of water for manufacturing processes, cooling, and other purposes.
- **For animals and plants:** All living beings need water to survive.

Why freshwater is considered precious:

- Water covers about two-thirds of the Earth's surface, but most of this water is saline (salty) water found in oceans and seas.
- Saline water is not fit for drinking, cooking, agriculture, or most industrial uses.
- Freshwater is present in ice sheets, snow, rivers, lakes, and underground, but freshwater in ice sheets and underground is difficult to access.
- Only a very small fraction of freshwater present in ponds, rivers, lakes, and wells is easily accessible to us.
- This easily accessible freshwater is limited, and there is a shortage of water in many parts of India and the world.
- Everyone does not have equal access to water. Some people have to walk long distances to fetch drinking water.
- Therefore, freshwater is a precious resource that must be conserved and used judiciously.

Three methods of water conservation:

1. **Rainwater harvesting:**
    - Rainwater harvesting is the collection and storage of rainwater for later use.
    - In this system, rainwater is collected from rooftops and stored in large tanks or reservoirs.
    - This stored water can be used for various purposes like watering plants, washing, and other household activities.
    - It reduces our dependence on other freshwater sources and helps in groundwater recharge.
    - It is an age-old practice in India. Examples include stepwells (Bawadi in Rajasthan and Vav in Gujarat).
2. **Fixing water leakages and turning off taps:**
    - Leaking taps and pipes waste a significant amount of water over time.
    - All leakages should be repaired immediately to prevent wastage.
    - Taps should be turned off when not in use - while brushing teeth, washing hands, or during any activity when water is not actively needed.
    - This simple practice can save thousands of liters of water annually.
3. **Recycling and reusing water:**
    - Water used for washing vegetables, rice, or other activities can be reused for watering plants or

cleaning floors.
    - Water from washing machines can be used for flushing toilets or cleaning purposes.
    - This reduces the total amount of fresh water needed and helps conserve this precious resource.

Conclusion: Water is essential for all life forms. Since freshwater is limited and not everyone has equal access to it, we must conserve water through various methods and use it responsibly to ensure its availability for present and future generations.

SECTION E - Answers to Case Study Based Questions

19. Case Study 1 - Answers

(a) What is the purpose of building stepwells? (1 mark)

The purpose of building stepwells is to harvest and store water. They are built as a response to water scarcity in regions like Rajasthan and Gujarat. Stepwells collect and store rainwater as well as water seeping from nearby lakes, ponds, and rivers for later use.

(b) Name two states where stepwells are commonly found. (1 mark)

- Rajasthan (where they are called Bawadi)
- Gujarat (where they are called Vav)

(c) How do stepwells help in water conservation and groundwater recharge? (2 marks)

Stepwells help in water conservation and groundwater recharge in the following ways:

- **Water storage:** Stepwells have a unique system that stores not only rainwater but also water seeping from nearby lakes, ponds, and rivers. The walls of the trenches are lined with blocks of stones that allow seepage of water. This stored water can be used during dry periods.
- **Groundwater recharge:** The water collected in stepwells slowly seeps into the ground through the porous stone walls, helping to recharge the groundwater table in the surrounding area.
- **Traditional wisdom:** Stepwells represent age-old traditional water harvesting practices in India that have sustained communities for centuries.
- **Accessibility:** The step structure allows easy access to water at different levels, even when water levels drop during dry seasons.

20. Case Study 2 - Answers

(a) What is a windmill farm? (1 mark)

A windmill farm is an area that has a large number of windmills installed together. These windmills use the energy of the wind to generate electricity. Examples include Muppandal Wind Farm in Tamil Nadu, Jaisalmer Wind Park in Rajasthan, and Brahmanvel Wind Farm in Maharashtra.

(b) Name one advantage of using wind energy. (1 mark)

- Wind energy is clean and does not cause pollution.
- Wind energy is a renewable resource and will never get exhausted.
- It reduces our dependence on fossil fuels.
- Wind energy is environment-friendly and does not emit harmful gases.

(Any one advantage is acceptable)

(c) Explain how windmills generate electricity. Why is wind energy considered renewable? (2 marks)

How windmills generate electricity:

- Windmills have large wings or blades that are mounted on a tall tower.
- When wind blows, it strikes the blades and makes them rotate.
- The rotating blades are connected to a generator (a machine that converts mechanical energy into electrical energy).
- As the blades rotate, the generator also rotates and produces electricity.
- This electricity is then distributed through power lines to homes and industries.

Why wind energy is considered renewable:

- Wind is a natural phenomenon that occurs due to uneven heating of the Earth's surface by the Sun.
- Wind will continue to blow as long as the Sun shines and the Earth exists.
- Unlike fossil fuels, wind energy does not get exhausted or depleted with use.
- It is continuously replenished by natural processes, making it a renewable resource.
- We can use wind energy again and again without worrying about running out of it.
