



UNIQUE STUDY POINT

Chapter 5 Water

Question 1: Answer the following questions.

(i) What is precipitation?

Solution: Sun's heat causes water to evaporate. When the water vapour rises, it begins cooling. The condensing water vapour forms droplets of water. Masses of such water droplets form clouds and float in air. When these droplets become too heavy to float in air, they fall upon land or sea in the form of rain, snow or sleet. This is known as precipitation.

(ii) What is the water cycle?

Solution: The process by which water continually changes its form and circulates between oceans, atmosphere and land is known as the water cycle.

(iii) What are the factors affecting the height of the waves?

Solution: The factors affecting the height of the waves are as follows:

- Speed of the wind
- Earthquake, Volcanic eruptions or Underwater landslides

(iv) Which factors affect the movement of ocean water?

Solution: The factors affecting the movement of ocean water are as follows:

- Temperature
- The gravitational pull of sun and moon
- Warm and cold currents
- Temperature

(v) What are tides and how are they caused?

Solution: The rhythmic rise and fall of ocean water, twice in a day, is called a tide. Tides are caused by the gravitational force exerted by the sun and the moon on the earth's surface.

(vi) What are ocean currents?

Solution: The streams of water flowing constantly on the ocean surface in a definite direction are called ocean currents. The ocean currents may be warm or cold.

Question 3: Give reasons.

(i) Ocean water is salty.

Solution: The ocean bodies and the seas contain salty water. The water of oceans is salty or saline as it contains large amount of dissolved salts. Most of this salt is sodium chloride.

(ii) The quality of water is deteriorating.

Solution: The water quality is deteriorating because of human activities like

- Deforestation
- Throwing garbage and other waste in water bodies
- Chemicals released from industries
- Increased use of fertilisers and pesticides

Question 3: Tick the correct answer.

(i) The process by which water continually changes its form and circulates between oceans, atmosphere and land

(a) Water cycle

(b) Tides

(c) Ocean currents

Solution: (a) Water cycle

(ii) Generally, the warm ocean currents originate near

- (a) Poles
- (b) Equator
- (c) None of these

Solution: (b) Equator

(iii) The rhythmic rise and fall of ocean water twice in a day is called

- (a) Tide
- (b) Ocean current
- (c) Wave

Solution: (a) Tide

Question 4: Match the following.

(i) Caspian Sea	(a) Largest lake
(ii) Tide	(b) Periodic rise and fall of water
(iii) Tsunami	(c) Strong seismic waves
(iv) Ocean currents	(d) Streams of water moving along definite paths
	(e) Water cycle

Solution:

(i) Caspian Sea	(a) Largest lake
(ii) Tide	(b) Periodic rise and fall of water
(iii) Tsunami	(c) Strong seismic waves
(iv) Ocean currents	(d) Streams of water moving along definite paths

Extra Questions
Very Short Answer Questions

1. In what form does water vapour come on the earth?

Answer: When the water vapour cools down, it condenses and forms clouds. From there, it may fall on land or sea in the form of rain, snow or sleet.

2. What is terrarium?

Answer: It is an artificial enclosure for keeping small house plants.

3. Name the sources of freshwater.

Answer: The major sources of fresh water are the rivers, ponds, springs and glaciers.

4. Where is salty water found?

Answer: The ocean bodies and the seas contain salty water. The water of the ocean is salty or saline as it contains large amount of dissolved salts.

5. What is salinity?

Answer: Salinity is the amount of salt in grams present in 1000 grams of water.

6. What is unique about ocean movements?

Answer: Unlike the calm waters of ponds and lakes, ocean water keeps on moving continuously. It is never still. The movements that occur in the oceans can be broadly categorised as waves, tides and currents.

7. When are waves formed?

Answer: Waves are formed when winds scrape across the ocean surface. The stronger the wind blows, the bigger the waves become.

8. What are waves?

Answer: When the water on the surface of the ocean rises and falls alternatively, they are called waves.

9. How are high tides and low tides formed?

Answer: It is high tide when water covers much of the shore by rising to its highest level. It is low tide when water falls to its lowest level and recedes from the shore.

10. Why is high tide caused?

Answer: The water of the earth closer to the moon gets pulled under the influence of the moon's gravitational force and causes high tide.

11. Name the two types of tides formed.

Answer: Spring tides and neap tides.

12. What are spring tides?

Answer: During the full moon and new moon days, the sun, the moon and the earth are in the same line and the tides are highest. These tides are called spring tides.

Short Answer Questions

1. What are neap tides?

Answer: When the moon is in its first and last quarter, the ocean waters get drawn in diagonally opposite directions by the gravitational pull of the sun and the Earth resulting in low tides. These are called neap tides.

2. How are high tides useful?

Answer: (i) High tides help in navigation.

(ii) They raise the water level close to the shores.

(iii) High tides also help in fishing. As high tides come closer to the shores, they enable fishermen to get a plentiful catch.

(iv) The rise and fall of water due to tides is being used to generate electricity.

3. How do ocean currents influence us?

Answer: (i) The ocean currents influence the temperature conditions of the area.

(ii) Warm currents bring about warm temperature over land surface. The areas where the warm and cold currents meet provide the best fishing grounds of the world.

(iii) Seas around Japan and the eastern coast of North America are its example.

(iv) The areas where warm and cold currents meet provide foggy weather making the navigation difficult.

Long Answer Questions

1. What is tsunami? Explain with the help of an example.

Answer: (i) During a storm, the winds blowing at a very high speed form huge waves.

(ii) These waves can cause tremendous destruction.

(iii) An earthquake, a volcanic eruption or underwater landslide can shift large amounts of ocean water. As a result, a huge tidal wave called tsunami, that may be as high as 15 m, is formed.

(iv) The largest tsunami ever measured was 150 m high.

(v) These waves travel at a speed of more than 700 km per hour.

(vi) The tsunami of 2004 caused wide spread damage in the coastal areas of India.

(vii) The Indira Point in the Andaman and Nicobar Islands got submerged after the tsunami.

2. Explain the various types of ocean currents with example.

Answer: (i) The ocean currents may be warm or cold.

(ii) Generally, the warm ocean currents originate from the equator and move towards the poles.

(iii) The cold currents carry water from polar or higher latitudes to tropical or lower latitudes.

(iv) The Labrador Ocean current is a cold current while the Gulf Stream is a warm current.

Hots (Higher Order Thinking Skills)

1. What is atmospheric pressure? Explain the relationship of temperature and pressure.

Answer: (a) Air pressure is the pressure exerted by the weight of air on the Earth's surface.

(b) Air tends to exert a force on us but we don't feel it because the air presses us on all sides and our body exerts counter pressure.

(c) Atmospheric pressure is maximum at the sea level (1013.25 millibar), but it decreases with increase in height.

(d) There is an inverse relationship between temperature and pressure.

If temperature is high then pressure is low. Atmospheric pressure also gets affected by the following factors:

(i) Temperature: Horizontally, the distribution of air pressure is influenced by temperature of air at a given place. Due to intense sunrays, surface gets heated which also heats the overlying air. After heating, the air expands in volume and becomes lighter in weight and rises up due to which low pressure area is created.

(ii) Altitude: As we move higher from the sea level, the temperature goes on decreasing. At higher altitudes air is cold. Cold air is heavy. Heavy air sinks and creates high pressure. Air moves from high pressure areas to low pressure areas.

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