

* Select and write one most appropriate option out of the four options given for each of the questions [28]

1. Which of the following is called the 'blue planet'?

- (A) The moon (B) The earth (C) Continents (D) Oceans

Ans. : (B) The earth

2. The emblem of the Indian Navy motto invokes the deity.

- (A) Shiva (B) Lord Rama (C) Lord Hanuman (D) Varuna

Ans. : (D) Varuna

3. Which of the following hemispheres holds more water?

- (A) Eastern Hemisphere (B) Southern Hemisphere
(C) Northern Hemisphere (D) Western Hemisphere

Ans. : (B) Southern Hemisphere

4. Which of the following is the busiest ocean?

- (A) Atlantic Ocean (B) Indian Ocean (C) Pacific Ocean (D) Arctic Ocean

Ans.: (A) Atlantic Ocean

5. Which Of the following is the odd one out?

- (A) Rivers (B) Lakes (C) Sea (D) Groundwater

Ans. : (C) Sea

6. Tsunamis are:

- (A) Earthquake (B) Volcanic eruption
(C) Cyclones (D) Huge powerful waves

Ans. : (D) Huge powerful waves

7. How many continents are there in the world?

- (A) 8 (B) 10 (C) 7 (D) 6

Ans. : (C) 7

8. Which of the following continents lies completely in the Northern Hemisphere?

- (A) Australia (B) Europe (C) South America (D) Africa

Ans. : (B) Europe

9. Which of the following is the smallest continent?

- (A) Australia (B) Europe (C) Antarctica (D) Africa

Ans.: (A) Australia

10. Where is 97 % of water found on the Earth?



- (A) In seas (B) Underground (C) In lakes (D) In oceans

Ans. : (D) In oceans

11. Which of the following is the largest ocean?

- (A) Pacific Ocean (B) Atlantic Ocean (C) Indian Ocean (D) Antarctica Ocean

Ans.: (A) Pacific Ocean

12. Arrange the following oceans according to their sizes from larger to smaller.

- I. Arctic Ocean
II. Atlantic Ocean
III. Indian Ocean
IV. Pacific Ocean

- (A) I, II, III, IV (B) II, I, III, IV (C) IV, II, I, III (D) IV, II, I, III

Ans. : (D) IV, II, I, III

13. Arrange the following continents according to their sizes from smaller to larger.

- I. Europe
II. Asia
III. Africa
IV. Antarctica

- (A) I, IV, III, I (B) I, II, III, IV (C) III, IV, I, II (D) II, IV, I, III

Ans.: (A) I, IV, III, I

14. Identify the continent that is being talked about in the following statements.

- (i) It is a huge continent that lies completely in the Southern Hemisphere.
(ii) There are no permanent human settlements.
(iii) Two Indian research stations: Maitri and Dakshin Gangotri are located there.

- (A) Europe (B) Africa (C) Antarctica (D) Asia

Ans. : (C) Antarctica

15. Assertion (A) Oceans cover nearly three-fourths of the Earth's surface.

Reason (R) The Earth is called the 'blue planet' because of its extensive water coverage.

- (A) Both A and R are true and R is the correct explanation of A
(B) Both A and R are true, but R is not the correct explanation of A
(C) A is true, but R is false
(D) A is false, but R is true

Ans.: (A) Both A and R are true and R is the correct explanation of A

16. Assertion (A) Tsunamis can travel thousands of kilometers and cause widespread damage.

Reason (R) Tsunamis are caused by strong earthquakes or volcanic eruptions at the bottom of the ocean

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true, but R is not the correct explanation of A
- (C) A is true, but R is false
- (D) A is false, but R is true

Ans.: (A) Both A and R are true and R is the correct explanation of A

17. Assertion (A) Freshwater makes up a large proportion of the planet's water resources.

Reason (R) Most of the freshwater is found in glaciers, rivers, lakes, atmosphere and underground.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true, but R is not the correct explanation of A
- (C) A is true, but R is false
- (D) A is false, but R is true

Ans. : (D) A is false, but R is true

18. "Rahul Roy is a businessman from India and he has to travel from New Delhi (Asia) to Brazil (South America) for his business meetings. He chooses to take a flight and therefore, he has to cross different continents and oceans." Choose the option of continents/oceans that will come in his journey.

- | | | | |
|--|---|---|---|
| (A) Asia, Indian Ocean, Africa, Atlantic Ocean, South America. | (B) Asia, Indian Ocean, Europe, Atlantic Ocean, South America | (C) Indian Ocean, Africa, Atlantic Ocean, South America | (D) Asia, Africa, Atlantic Ocean, South America |
|--|---|---|---|

Ans. : (a) Asia, Indian Ocean, Africa, Atlantic Ocean, South America.

19. What is the most widespread colour seen on Earth from space?

- | | | | |
|-----------|----------|-----------|-----------|
| (A) Green | (B) Blue | (C) Brown | (D) White |
|-----------|----------|-----------|-----------|

Ans. : (B) Blue

20. What percentage of Earth's surface is covered with water?

- | | | | |
|----------------|---------------|----------|-------------------|
| (A) One-fourth | (B) One-third | (C) Half | (D) Three-fourths |
|----------------|---------------|----------|-------------------|

Ans. : (D) Three-fourths

21. Which Vedic deity is associated with oceans, the sky, and water?

- | | | | |
|-----------|----------|------------|-----------|
| (A) Indra | (B) Agni | (C) Varuna | (D) Surya |
|-----------|----------|------------|-----------|

Ans. : (C) Varuna

22. How many oceans are there on Earth according to the text?

- | | | | |
|----------|----------|---------|-----------|
| (A) Four | (B) Five | (C) Six | (D) Seven |
|----------|----------|---------|-----------|



Ans. : (B) Five

23. Which ocean lies to the west of India?

- (A) Bay of Bengal (B) Arabian Sea (C) Pacific Ocean (D) Southern Ocean

Ans. : (B) Arabian Sea

24. Which is the smallest continent in the world?

- (A) Australia (B) Europe (C) North America (D) Africa

Ans. : A. Australia

Explanation.

According to the area Australia is the smallest continent

25. The deepest ocean of the world is the:

- (A) Indian Ocean (B) Pacific Ocean (C) Arctic Ocean (D) Atlantic Ocean

Ans. : B. Pacific Ocean

Explanation.

The depth of the ocean is more as compared to others.

26. Which ocean is named after a country?

- (A) Indian Ocean (B) Atlantic Ocean (C) Arctic Ocean (D) Pacific Ocean

Ans. : A. Indian Ocean

Explanation.

Indian ocean named after country India.

27. Continents are also surrounded by water, but because they are so large, they are not considered

- (A) islands (B) plains (C) desert (D) plateau

Ans. : A. islands

Explanation.

Area of the continents is too large as compared to island.

28. Which continent is known as the 'White Continent'?

- (A) Antarctica (B) Europe (C) Australia (D) Asia

Ans. : A. Antarctica

Explanation.

Antarctica is known as the 'White Continent' because , it always remains under a thick cover of ice.

* **Assertion - Reasoning based questions.**

[9]

29. Assertion (A): The Indian Ocean Tsunami Warning System helps to protect lives and property.

Reason (R): The Indian Ocean Tsunami Warning System can detect tsunamis before they hit the coast.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (C) (A) is correct but (R) is wrong.
- (D) (A) is wrong but (R) is correct.

Ans.: (A) Both (A) and (R) are true and (R) is the correct explanation of (A).

30. Assertion (A): Continents and oceans are evenly distributed between the Northern and Southern Hemispheres.

Reason (R): Oceans cover almost three-fourths of the Earth's surface.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (C) (A) is correct but (R) is wrong.
- (D) (A) is wrong but (R) is correct.

Ans. : (D) (A) is wrong but (R) is correct.

31. Assertion (A): The oceans produce more than half of the world's oxygen.

Reason (R): The marine flora, including algae and seaweeds, contribute significantly to oxygen production.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (C) (A) is correct but (R) is wrong.
- (D) (A) is wrong but (R) is correct.

Ans.: (A) Both (A) and (R) are true and (R) is the correct explanation of (A).

32. Assertion (A): Overfishing is a major cause of the decline of marine life.

Reason (R): Excessive fishing depletes fish populations faster than they can reproduce.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (C) (A) is correct but (R) is wrong.
- (D) (A) is wrong but (R) is correct.

Ans.: (A) Both (A) and (R) are true and (R) is the correct explanation of (A).

33. Assertion (A): The 2004 tsunami caused widespread damage in the Indian Ocean region.

Reason (R): The tsunami was triggered by a volcanic eruption.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (C) (A) is correct but (R) is wrong.



(D) (A) is wrong but (R) is correct.

Ans. : (C) (A) is correct but (R) is wrong.

34. Assertion: Oceans support all kinds of marine life and play a critical role in the world climate.

Reason: Oceans are now seriously affected by human activity and need our collective protection.

(A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(C) Assertion (A) is true, but Reason (R) is false.

(D) Assertion (A) is false, but Reason (R) is true.

Ans. : A. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Explanation.

Oceans play vital role in sustaining live but on the other hand it is polluted by humans as well.

35. Assertion: North America and South America are generally considered to be two continents.

Reason: But if seen as a single landmass, they can also be considered as one.

(A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(C) Assertion (A) is true, but Reason (R) is false.

(D) Assertion (A) is false, but Reason (R) is true.

Ans. : A. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Explanation.

When seen as a single landmass, they can also be considered as one.

36. Assertion: A tsunami is a natural disaster that originates in the desert.

Reason: Tsunamis can travel thousands of kilometres and submerge coastal areas, causing widespread damage.

(A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(C) Assertion (A) is true, but Reason (R) is false.

(D) Assertion (A) is false, but Reason (R) is true.

Ans. : D. Assertion (A) is false, but Reason (R) is true.

Explanation.

A tsunami is another natural disaster that originates in the ocean. It is a huge and powerful wave generally caused by a strong earthquake or a volcanic eruption at the bottom of the ocean.

37. Assertion: The animal life of a particular region or period of time is called Fauna.

Reason: The plant life of a particular region or period of time is called Flora.

(A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(C) Assertion (A) is true, but Reason (R) is false.

(D) Assertion (A) is false, but Reason (R) is true.

Ans. : B. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Explanation.

The Flora and Fauna of a place define its plant and animal life. They vary from place to place.

* Fill in the blank with correct answer.[1 Mark each]

[20]

38. Tsunamis are _____ but very _____.

Ans. : rare/destructive

39. The _____ Ocean is the largest of all Oceans.

Ans. : Pacific

40. The approximate proportion of water to land in the Northern Hemisphere is _____ land and 60% water. While in the Southern Hemisphere, it is 20% land and _____% water.

Ans. : 40%, 80%

41. The first scientific base station established by India at Antarctica was called _____.

Ans. : Dakshin Gangotri

42. Oceans are send rain and are an integral part of the Earths _____.

Ans. : Water cycle

43. Almost three-fourths of the Earth's surface is covered with _____.

Ans. : water

44. The continent Asia lies in the _____ Hemisphere.

Ans. : Northern

45. The shape of the Pacific Ocean is _____.

Ans. : circular

46. Oceans have nourished the cultures of _____ people all over the world.

Ans. : coastal

47. Oceans play a crucial role in regulating the _____ and sustaining life on Earth.

Ans. : climate

48. The Earth is often called the _____ planet.

Ans. : blue

49. A large body of land is called a _____.

Ans. : landmass

50. Freshwater makes up a very small proportion of the planet's water resources and is found in glaciers, rivers, lakes, the atmosphere, and underground, which is called _____.

Ans. : groundwater

51. The largest island in the world is _____.

Ans. : Greenland

52. June 8 is designated by the United Nations as _____.

Ans. : World Oceans Day

53. The United Nations has designated June 8 as _____.

Ans. : World Oceans Day

54. Continents may be counted in various ways; the most common count is _____.

Ans. : Seven

55. Oceans play a crucial role in regulating the _____ and sustaining life on Earth.

Ans. : Climate

56. The animal life of a particular region or period of time is called _____.

Ans. : Fauna

57. _____ colour represents the land.

Ans. : Brown

*** State if the following are true or false.[1 Mark each]**

[20]

58. Oceans and continents are distributed equally between Northern , and Southern Hemisphere!



Ans. : false

59. Continents do not include all landmass.

Ans. : true

60. Oceans and continents are vital parts of the environment.

Ans. : true

61. More than half of the world's oxygen is produced by the Ocean's fauna.

Ans. : false

62. Europe and Russia are regarded as Eurasia by geologists.

Ans. : false

63. The Earth appears mostly blue from outer space because most of its surface is covered with land.

Ans. : false

64. The oceans hold most of the Earth's freshwater.

Ans. : false

65. There are five oceans on Earth: the Pacific, Atlantic, Indian, Arctic and Southern (or Antarctic) Oceans.

Ans. : true

66. A tsunami is a powerful wave generally caused by a strong earthquake or volcanic eruption at the bottom of the ocean.

Ans. : true

67. The continents of Europe and Asia are often considered a single continent called Eurasia by geologists.

Ans. : true

68. Most of the Earth's surface is covered with land.

Ans. : false

69. Oceans and continents are equally distributed between the Northern and Southern Hemispheres.

Ans. : false

70. Tsunamis are generally caused by strong earthquakes or volcanic eruptions at the bottom of the ocean.

Ans. : true

71. The Earth's oceans are separate and do not interconnect.

Ans. : false

72. Oceans support all kinds of marine life and play a critical role in the world climate.

Ans. : true

73. The Northern Hemisphere has more land than the Southern Hemisphere.

Ans. : true

74. Greenland is the smallest island in the world.

Ans. : false

75. Africa and Eurasia are generally regarded as two continents, but sometimes as one.

Ans. : true

76. The plant life of a particular region or period of time is called Fauna.

Ans. : false

77. Overfishing is a significant threat to marine life.

Ans. : true

*** Answer the questions.[1 Mark each]**

[35]

78. Are Tsunamis common? How can we protect lives and property?

Ans. : Tsunami of the magnitude of 26th December 2004 are rare. Tsunamis can often be detected before they hit a coast.

Many countries have come together in 'early warning system'. There is an Indian Ocean Tsunami Warning System to which India contributes with other countries. This enables and helps take measures to protect lives and property.

79. Look at the table above and answer in practice which of the above count is the most widely adopted and used.

Ans. : The count of seven continents – Africa, Antarctica, Asia, Australia, Europe, North America, South America.

80. Describe the geographical significance of the Arabian Sea and the Bay of Bengal to India.

Ans. : The Arabian Sea lies to the West of India, while the Bay of Bengal is situated to the East. These two parts of the Indian Ocean play significant roles in India's climate, trade routes and maritime activities. The Arabian Sea is key to India's trade with the Middle East and Africa, while the Bay of Bengal connects India with South-East Asia. Both water bodies influence the monsoon patterns, which are vital for India's agriculture and overall economy.

81. What is the most widespread colour on globe/picture of the Earth represent, what does it represent?

Ans. : The most widespread colour on the globe/picture of the Earth is 'Blue'. It represents 'Water'.

82. What is the large body of land called and what is a large continuous expanse of land?

Ans. : The large body of land is called 'landmass'. A large continuous expanse of land is called a 'continent'.

83. Why is ocean water unfit for consumption by humans?

Ans. : The oceans together hold most of the water available but the seawater is unfit for consumption because it is salty.

84. Give one difference between marine flora and marine fauna.

Ans. : Marine flora includes tiny plants called algae and all kinds of seaweeds. While marine fauna consists of thousands of colourful fish, dolphins, whales and countless mysterious deep-sea creatures.

85. Enumerate limits of the Indian Ocean.

Ans. : The main limits of the Indian Ocean are : Asia to the north, Africa to the west, Australia to the east and the Southern Ocean in the south.

86. What are the main limits of the Indian Ocean?

Ans. : The main limits of the Indian Ocean are : Asia to the north, Africa to the west, Australia to the east Southern Ocean in the South.

87. Give names of two parts of the Indian Ocean which are on either side of India?

Ans. : The two parts of Indian Ocean to the east and west of the Indian subcontinent are :

1. the Bay of Bengal to the east
2. the Arabian sea to the west.

88. Look at the map given on (NCERT book page 33) and give names of India's two major groups of Islands.

Ans. : The two major groups of islands are :

1. Andaman and Nicobar Islands in the Bay of Bengal.
2. Lakshadweep Islands in the Arabian Sea.

89. Which Organisation is responsible to deal with all kinds of disasters in India (Bharat).

Ans. : The National Disaster Management Authority.

90. (a) What is the largest island in the world ?
(b) How would you compare its size to India/Bharat ?

Ans. : (a) Greenland.

(b) Areas of 10 largest states of India have to be added to reach its size.

91. Approximately India is home to how many small islands? Give names of two major groups of islands in India.



Ans. : 1. More than 1,300 small islands.

2. Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea.

92. When is United Nations (UN) designation of World Oceans Day?

Ans. : June 8th

93. What colour do early astronauts associate with Earth and why?

Ans. : The early astronauts associated Earth with blue colour due to the abundance of water bodies on the Earth.

94. Which deity is invoked in the motto of the Indian Navy?

Ans. : The deity Varuna is invoked in the Motto of the Indian Navy. He is the god of water and Air.

95. In which hemisphere is the majority of Earth's water located?

Ans. : The majority of Earth's water is located in the Southern Hemisphere.

96. What kind of water is found in glaciers, rivers, lakes and underground, and why is it important?

Ans. : The freshwater is found in glaciers, rivers, lakes and underground water. It is important because it is fit for human use.

97. What kind of life forms are sustained by the seawater that flows across different oceans?

Ans. : Various marine flora and fauna are sustained by the seawater that flows across different oceans. For example, algae, seaweeds, etc.

98. What two parts of the Indian Ocean are found to the West and East of India?

Ans. : The two parts of the Indian Ocean around India are the Arabian Sea in the West and the Bay of Bengal in the East.

99. What causes tsunamis and what are their potential impacts on coastal areas?

Ans. : Earthquake waves cause tsunamis and they have the potential to destroy the coastal areas.

100. How many continents are generally listed and what are they named?

Ans. : Generally there are 7 continents. They are named as Asia, Africa, South America, North America and Antarctica, Europe and Australia.

101. Which island is known as the largest in the world?

Ans. : Greenland is considered as the largest island in the world.

102. What is the purpose of the Indian Antarctica Programme?

Ans. : The purpose of the Indian Antarctica Programme is to conduct research on the evolution of climate over time.



103. What event led to the establishment of the Indian Ocean Tsunami Warning System?

Ans. : The Tsunami of 26 th December, 2004 led to the establishment of the Indian Ocean Tsunami Warning System.

104. Which authority in India is responsible to deal with disaster management?

Ans. : In India, the National Disaster Management Authority (NDMA) is responsible to deal with all types of disaster.

105. Why would the Earth be a desert without oceans?

Ans. : The Earth would become a desert without oceans because clouds, which are essential for rainfall, form over the oceans.

106. What are the circular lines in each map called? And do you know what the lines radiating out of the two poles are called? (**Hint:** you studied them in the previous chapter, but here they are presented differently.)

Ans. : The circular lines in each map are the latitudes and longitudes. The lines radiating out of the two poles are 90°N and 90°S.

107. Which hemisphere holds more water?

Ans. : The Southern Hemisphere contains more water.

108. What do you think could be the approximate proportion of water to land in the Northern Hemisphere? And in the Southern Hemisphere? Discuss in groups.

Ans. : The approximate proportions of water to land in the Northern and Southern Hemispheres is

Northern Hemisphere

- **Water** About 60% of the surface area.
- **Land** About 40% of the surface area.

Southern Hemisphere

- **Water** About 80% of the surface area.
- **Land** About 20% of the surface area.

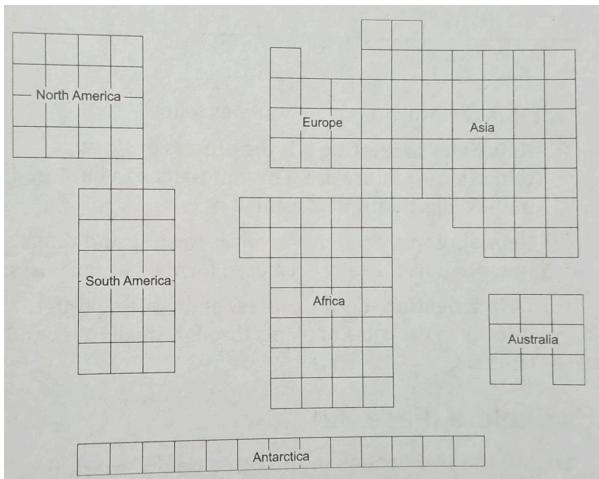
109. Are all the oceans connected with one another, or are there separations between them?

Ans. : Yes, all the oceans are connected to one another. There is no strict division around the boundaries of the oceans.

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110. Counting the numbers of squares, name the largest continent and the smallest.



Ans. : Asia is the largest continent as there are 44 blocs in Asia. Australia is the smallest with 8 blocs.

111. Which-one is larger - North America or South America? Africa or North America? Antarctica or Australia?

Ans. : • South America is larger than North America.

• Africa is larger than North America.

• Antarctica is larger than Australia.

112. Re-colour the diagram by having a single colour for Europe and Asia and rename the result as 'Eurasia'. Compare its size with the continent of South America.

Ans. : The blocs in Eurasia will be 47 and in South America are 18. There will be a difference of 29 blocks between the two continents. Hence, Eurasia will be more than double of South America's size.

* very short answer questions. [2 Mark each]

[38]

113. Continents do not include all landmass. Some smaller pieces of land are left out; surrounded by water on all sides. What are such landmasses called? Does India have any of them? Discuss.

Ans. : The smaller pieces of land that are left out of the continents are surrounded by water from all sides are known as islands.

India has more than 1,300 small islands. Those islands are part of two major groups- Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea. The Andaman and Nicobar Islands are known for their unique biodiversity, including endemic species and diverse marine life. The Lakshadweep islands are renowned for their coral reefs and marine biodiversity.

114. (a) Draw and colour the symbol of the Olympic Games.

(b) How many rings are there ?

(c) What does the symbol symbolise ?

(d) The widely adopted practice lists seven continents. Why are there only 5 rings

?

(e) In which country/city were Olympics held in the year 2024.

Ans. : (a)



(b) There are five interlocked rings.

(c) The symbol symbolises the gathering of sports people from all over the world.

(d) The rings are only 5, because they were chosen to represent five inhabited continents Africa, America, Asia, Australia and Europe.

(e) France/Paris.

115. Discuss briefly how the oceans are polluted by human activity.

Ans. : Human activity has led to the pollution of oceans.

1. Throwing of several million tonnes of plastic wastes every year leading to choking of marine life. Fish seabirds, sea turtles, marine mammals not only get entangled in plastic, but plastic debris causes suffocation and starvation of marine life.

2. Excessive fishing i.e. overfishing has led to decline in marine life, (m) Chemicals, fertilisers etc used' in industries and agriculture plus trash are washed, blown or intentionally dumped into oceAnswer:

3. Warning : Greenhouse gases in the atmosphere trap energy from the sun. The oceans absorb much of this energy, causing ocean waters to warm whereby there is less available dissolved oxygen for native sea life which negatively impacts the biological process.

116. Discuss the ecological importance of the various life forms found within the different zones of the ocean, from the Sun-lit surface to the dark depths.

Ans. : The ocean is divided into different zones, each supporting distinct forms of life. The Sun-lit surface zone hosts photosynthetic organisms like phytoplankton, which form the basis of the marine food web. This zone also supports a diverse range of fish, marine mammals and birds.

As we move deeper into the ocean, light reduces. It supports life forms adapted to high pressure and cold temperatures, such as certain species of squid and anglerfish. The deepest parts of the ocean have unique creatures like tube worms and deep-sea jellyfish. Each zone's biodiversity is crucial for the overall health of marine ecosystems, contributing to nutrient cycling, carbon sequestration, and supporting fisheries that humans rely on.

117. Briefly list out some of India's engagement with the continent of Antarctica.



Ans. : (a) Since 1981, the Antarctica programme has been exploring Antarctica, a continent with a very cold climate and harsh environment.

(b) In 1983, India established its first scientific base station there called 'Dakshin Gangotri'. Since then two other stations 'Maitri' and 'Bharat' have been set up.

(c) About 40 teams of Indian scientists have conducted research especially on evolution of climate and environment.

118. How do Oceans impact climate?

Ans. : (a) The oceans affect climate by absorbing solar radiation. About 98% of the heat from the sun's rays are absorbed by Oceans

(b) They redistribute the heat across the globe, example through Ocean currents.

(c) Oceans are estimated to capture about 40% of CO₂ from the atmosphere.

(d) They help increase atmospheric humidity and send rain to the continents. Example: In India, the monsoons originate in the Oceans.

119. 'All Oceans are interconnected'. Explain.

Ans. : Although we list five oceans, the lines that divide them on the map are mere conventions.

(a) The natural world does not follow such boundaries sea water constantly flow across different oceans. Many plants and animal species can be found across multiple oceans.

(b) Marine fauna consists of thousands of colourful fish, dolphins, whales, mysterious sea creatures. Each part of ocean has its own diverse life forms from sun-lit surface to the dark depths but through pattern of migration many can be found – across oceans.

(c) Moreover if we look at the map carefully, they are connected some via the Arctic Ocean and some via the relatively narrow gap between South America and the Antarctica.

120. 1. What is the motto of the emblem of the Indian Navy ?

2. Give the meaning.

3. Which Vedic deity does it invoke ?

Ans. : 1. The motto of the emblem of the Indian Navy is 'Sam noh Varunah'.

2. It means 'Be auspicious to us, O Varuna'.

3. It invokes the Vedic deity Lord. Varuna who is associated with the oceans, the sky and water.

121. Give reasons why 26 December 2004, is related with natural disaster.

Ans. : 1. On 26 December 2004, India and 13 countries around the Indian Ocean were struck by a powerful Tsunami. Tsunamis are rare but very destructive.

2. By the Tsunami, caused by an earthquake in Indonesia, more than 2 lakh people lost their lives.



3. In India, the islands of Andaman and Nicobar and coasts of Tamil Nadu and Kerala were severely affected suffered much damage and loss of life.

122. Enumerate some measures that help protect lives and property in the event of warning of approaching Tsunami.

Ans. : 1. Stay away from the beach.

2. Plan evacuation routes from your home, school, work place, or any other place you could be where Tsunami present a risk.

3. If you are near a coast or experience shaking from an earthquake – Drop, cover and hold on to protect yourself.

4. If possible pick areas above sea level or go as far as 3 kms inland, away from the coast line.

5. If you cannot get this far or high go as high or far as you can.

6. Listen to emergency information and alerts (through scene or notification by voice or texts).

123. (a) Give names of the continent with a very cold climate and harsh environment.

(b) When did India start its Antarctica programme and establish its first scientific base station. What is it called ?

(c) Have any new bases been established since then ? If so how many. Give their names.

(d) How many teams of Indian scientists have conducted research here ? Mention the main area of their interest

Ans. : (a) Antarctica

(b) India started the Indian Antarctica programme in 1981 and established its first scientific research base station in 1983 called 'Dakshin Gangotri'.

(c) Since 'Dakshin Gangotri' 2 more bases were established later called 'Maitri' and 'Bharati'.

(d) About 40 teams of Indian scientists have conducted research in this faraway region. Their main area of interest is evolution of climate and environment. The settlement where the scientists live has a library and even a post office.

124. Why did UN designate a day as World Ocean Day?

Ans. : The UN has designated June 8th as World Oceans Day to remind us all of :

1. the major role the Ocean plays in everyday life.

2. how oceans serve as lungs of our planet Earth, and

3. are a major of food and medicine and a critical part of the biosphere.

125. What was the impact of the 26 th December, 2004 tsunami on countries around the Indian Ocean, and what measures were taken afterwards?

Ans. : The tsunami on 26 th December, 2004, triggered by a massive undersea earthquake, caused widespread devastation in countries around the Indian Ocean, including India, Indonesia, Sri Lanka and Thailand. The natural disaster resulted in



significant loss of life, property and infrastructure.

In response to this catastrophe, efforts were made to establish the Indian Ocean Tsunami Warning System to provide early warnings and reduce future impacts. This system aims to improve preparedness and response to potential tsunamis, enhancing safety for coastal communities.

126. Assess the impact of human activities on the ocean.
Answer: What are two major threats to ocean health, and what measures can be taken to mitigate these threats?

Ans. : Human activities have significantly impacted ocean health, with pollution and overfishing being two major threats. Pollution, including plastic waste and chemical runoff, harms marine life and disrupts ecosystems. Overfishing depletes fish populations and alters food webs.

To mitigate these threats, measures such as reducing plastic use, improving waste management, establishing marine protected areas, and enforcing sustainable fishing practices are essential. These actions can help preserve marine biodiversity and ensure the long-term health of ocean ecosystems.

127. Create a detailed diary entry from the perspective of an explorer navigating the oceans during the Age of Exploration. Describe the challenges and discoveries made during the journey.

Ans. : "Today marks our third month at sea since departing from Lisbon. The vast expanse of the Atlantic Ocean stretches endlessly before us. The crew is growing weary, but our spirits remain high with the promise of new lands and riches.

Navigating these treacherous waters is no easy feat—unpredictable storms and strong currents test our resolve daily. Yesterday, we encountered a pod of dolphins, a sight that lifted the men's spirits. Supplies are running low, and freshwater is scarce, but we press on, driven by the dream of reaching India and establishing new trade routes. The stars guide us by night, and by day, we chart our course with the astrolabe. Each dawn brings new challenges and the hope of discovery. May the seas be kind to us as we continue our voyage."

128. Research and present a case study on the Andaman and Nicobar Islands, focusing on their geographical features, biodiversity, and the impact of the 2004 tsunami.

Ans. : The Andaman and Nicobar Islands are a group of islands located in the Bay of Bengal. Geographically, they are characterised by hilly terrain and dense rainforests, which support a rich biodiversity, including unique species of flora and fauna. The islands are home to several indigenous tribes who have preserved their traditional ways of life.

The 2004 tsunami, triggered by an undersea earthquake near Indonesia, had a devastating impact on these islands, causing significant loss of life and property. The disaster highlighted the need for effective early warning systems and disaster preparedness strategies.

129. Write down the list of continents from the smallest to the largest.

Ans. : List of smallest to the largest continents.

- Australia
- Europe
- Antarctica
- North America
- South America
- Africa
- Asia.

130. Explain the following terms :

- (a) Continent
- (b) Ocean
- (c) Island

Ans. : (a) A continent is a large continuous expanse of land. On a map, continents are depicted as extensive landmasses that cover a significant portion of the Earth's surface. They are surrounded by water but are not considered islands due to their vast size. The seven widely accepted continents are Africa, Antarctica, Asia, Australia, Europe, North America and South America.

(b) An ocean is a large body of saltwater that covers a significant portion of the Earth's surface. Oceans are the largest water bodies on the globe, covering almost three-fourths of the Earth's surface. There are five main oceans, the Pacific Ocean, the Atlantic Ocean, the Indian Ocean: the Arctic Ocean and the Southern (or Antarctic) Ocean.

(c) An island is a smaller piece of land surrounded by water on all sides. Unlike continents, islands are not large enough to be considered landmasses. Islands can vary greatly in size, with some being large enough to host significant populations and infrastructure, while others may be small and uninhabited. An example of a large island is Greenland, the largest in the world.

131. Which one is larger-North America or South America, Africa or North America, Antarctica or Australia?

Ans. : South America is larger than North America, Africa is larger than North America and Antarctica is larger than Australia.

* **Answer short answer questions. [3 Mark each]** **[36]**

132. Depending on our choice, we may list any number of continents between four and seven. Why and how?

Ans. : The number of continents can vary between four and seven depending on how we choose to classify them. The variation in counting depends on whether we consider certain landmasses as combined or separate based on their historical and cultural evolution or geographical boundaries.



The different number of continents are given below :

Four continents	Africa-Eurasia, America, Antarctica, Australia
Five continents	Africa, America, Antarctica, Australia, Eurasia
Six continents	Africa, Antarctica, Australia, Eurasia, North America, South America
Seven continents	Africa, Antarctica, Asia, Australia, Europe, North America, South America

133. Evaluate the significance of the Earth's water bodies, including both saltwater and freshwater bodies, in supporting life and regulating the planet's climate.

Ans. : All the water bodies on the Earth play a major role in supporting life and regulating the planet's climate. The following statements support this fact

- Saltwater bodies, such as oceans and seas, cover about 71 % of the Earth's surface and are home to diverse ecosystems that support marine life and global fisheries.
- Oceans act as a major heat reservoir, absorbing solar radiation and distributing heat through currents, which moderates global temperatures and influences weather patterns.
- Freshwater bodies, including rivers, lakes, glaciers and groundwater, provide essential drinking water, support agriculture, and are vital for numerous terrestrial ecosystems.
- Freshwater bodies participate in the water cycle too, involving evaporation, condensation and precipitation.

All the water bodies are interconnected systems that are fundamental to Earth's environmental stability and the well-being of all living organisms.

134. Oceans are integral to sustenance of life on Earth. Discuss.

Ans. : For sustenance of any life on Earth the three essential are: Air, Water and Food for all of which the Oceans play a vital role.

(a) More than half of the world's oxygen is produced by the oceans flora which is why they are called the 'planet's lungs'. They capture an estimated 40% of the CO₂ produced.

(b) They help send rain to the continents. They are a part of the water cycle. Rains sustain agriculture (food) on earth and replenish fresh water resources. Example: The monsoon of India originates in the ocean.

(c) The Oceans feed life on earth, example fishes. Its biodiversity provides our global community with animal protein. In many developed countries seafood is primary source of protein.



(d) Apart from these essentials oceans regulate climate, provide job's livelihoods and have nourished cultures of people all over the world. They provide adventure and are store house of minerals e.g. petroleum for developing and sustaining economic development of mankind and nations.

135. Oceans sustain life but are not without perils for mankind? Discuss by giving examples.

Ans. : Yes oceans are a boon but not without perils.

(a) Ocean often give rise to storms violent events with extreme rainfall and very strong winds such as cyclones which cause widespread damage to coastal regions of the world.

(b) A tsunami is another natural disaster that originates in the ocean. It is a huge and powerful wave generally caused by a strong earthquake or a volcanic eruption of the bottom of the ocean.

(c) Tsunamis travel thousands of kilometres, submerge coastal areas, causing widespread damage to life and property.

Example : On 26th December 2004 India and 13 other countries around the Indian Ocean were struck by a powerful Tsunami caused by an earthquake in Indonesia. More than 2 lakh people lost their lives. In India the Andaman and Nicobar. Islands and the coasts of Tamil Nadu and Kerala were severely affected and suffered much danger and loss of life.

136. Explain the role and significance of the Indian Ocean Tsunami Warning System established after the 2004 tsunami.

Ans. : The Indian Ocean Tsunami Warning System (IOTWS) was established in response to the devastating tsunami of 26th December, 2004, which caused massive loss of life and property in multiple countries.

The system is designed to provide early warnings of potential tsunamis, enabling timely evacuations and other safety measures.

When a potential threat is identified, alerts are sent to national and regional authorities who then warn the public. The IOTWS has significantly improved the preparedness and response capabilities of countries around the Indian Ocean, reducing the risk of future tsunami-related casualties and damage.

By boosting international collaboration and enhancing local capacity for disaster management, the IOTWS plays a critical role in safeguarding coastal communities.

137. Explain what brown colour represents in the Earth's picture?

Ans. : (a) Brown is the colour of land.

(b) It covers $\frac{1}{4}$ th of the globe.

(c) A large body of land is called a landmass.

(d) A large continuous expanse of land is called a continent. There are seven continents in the world. Of them the largest is Asia and smallest is Australia.

- (e) The second largest is Africa followed by- South America and A North America.
 (f) Fifth is Antarctica followed by Europe.

138. Mention continents names.

Ans. :

Count of continents (in alphabetical order)	
Four continents	Africa-Eurasia, America, Antarctica, Australia
Five continents	Africa, America, Antarctica, Australia, Eurasia
Six continents	Africa, Antarctica, Australia, Eurasia, North America, South America
Seven continents	Africa, Antarctica, A'sia, Australia, Europe, North America, South America

139. Create a simple plan to conserve water at home. Outline three practical steps and explain how each step contributes to water conservation.

Ans. : To conserve water at home, my plan includes three practical steps: installing water-efficient fixtures, practising mindful water usage and reusing water. These are discussed below

First, I would install low-flow showerheads and faucets, as these fixtures reduce water flow without compromising functionality, saving significant amounts of water daily.

Second, I would ensure that all family members practice mindful water usage, such as turning off the tap while brushing their teeth and taking shorter showers, which directly reduces water waste.

Lastly, I would set up a system to collect and reuse greywater from sinks and showers for gardening purposes. This step not only reduces the demand for freshwater but also provides a sustainable way to maintain plants without additional water use.

These measures collectively contribute to water conservation by minimising waste and optimising the use of available water resources.

140. Let us draw - Without looking at the maps in this chapter, draw the continents free hand on a sheet of paper and colour them. Then compare your drawing with the map of oceans and continents in the chapter.

Ans. : self

141. If there is such an abundance of water on the planet, why is there so much talk of 'water scarcity' or a 'water crisis'?

Ans. : The water on the planet is in abundance but we often face scarcity of water because only some of the water is useful for human use.

The saline water of oceans cannot be used directly.

142. Read the paragraph given and answer the following questions.

Oceans and continents are vital parts of the environment and affect most aspects of our lives, even if we do not notice it. We have mentioned that oceans send rain to the continents; this is part of the Earth's water cycle, which you will further study in science.

Without oceans, for instance, there would be no rainfall! The Earth would be a desert. Moreover, more than half of the world's oxygen is produced by the oceans' flora, which is why they are called 'the planet's lung's. The oceans, therefore, play a crucial role in regulating the climate and sustaining life on Earth. Oceans have deeply impacted humanity in many other ways. From early times, people have used oceans and seas to migrate to other regions, to trade in all kinds of goods, to conduct military campaigns, and as a source of food through fishing. Oceans have also nourished the cultures of coastal people all over the world. Almost all of them have tales and legends about the sea, sea gods and goddesses, sea monsters and treasures from the sea the oceans' dangers but also their blessings.

(i) How do oceans contribute to the Earth's water cycle, and what would happen to the Earth without oceans ?

(ii) What is the significance of the flora in the oceans concerning the Earth's oxygen supply ?

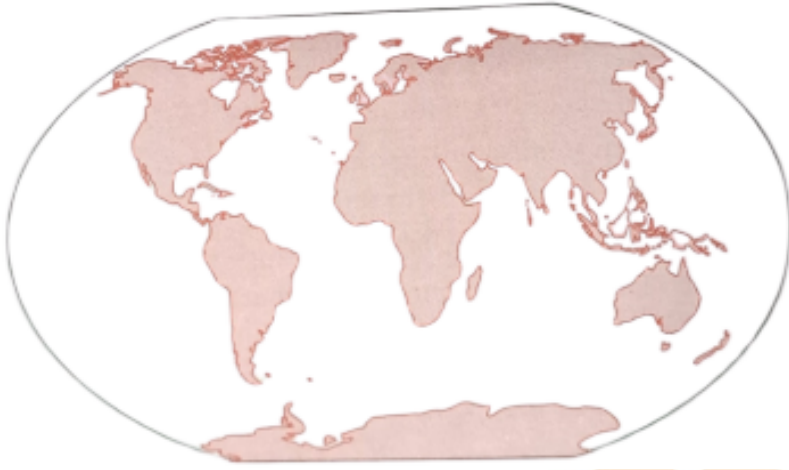
(iii) How have oceans historically impacted human activities and civilisations ?

Ans. : (i) Oceans send rain to the continents as part of the Earth's water cycle. Without oceans, there would be no rainfall, and the Earth would become a desert.

(ii) The ocean flora have a significant role to play in Earth's oxygen supply as more than half of the world's oxygen is supplied by the ocean flora. Hence, oceans are often called 'the Planet's lungs'.

(iii) Oceans have impacted humanity by enabling migration, trade, military campaigns and providing food through fishing. They have also nourished coastal cultures with tales, legends and resources.

143. Let us do-On the outline map of the world given below, label all the continents and oceans.



Ans. :



* Long answer questions [4 Mark each]

[4]

144. Read the passage given below and answer the following questions.

They are large masses of clouds. Such clouds bring rain to the continents; for instance, the monsoon rains we in India expect every summer originate in the ocean-without such rains, our agriculture and all life will suffer. But oceans often also give rise to stormsviolent events with extreme rainfall or very strong winds, such as cyclones, which can cause widespread damage to coastal regions of the world. A tsunami is another natural disaster that originates in the ocean. It is a huge and powerful wave generally caused by a strong earthquake or a volcanic eruption at the bottom of the ocean. Tsunamis can travel thousands of kilometres and submerge coastal areas, causing widespread damage.

(i) What natural phenomenon originating in the ocean is essential for agriculture in India during the summer ?

- (a) Cyclones
- (b) Tsunamis
- (c) Monsoon rains
- (d) Volcanic eruptions



(ii) How do large masses of clouds formed over oceans contribute to agriculture in regions like India ?

- (a) By creating high-pressure systems
- (b) By enhancing photosynthesis directly
- (c) By providing essential rainfall during the monsoon season
- (d) By reducing soil erosion

(iii) Why are monsoon rains important for India ?

- (a) They bring strong winds
- (b) They originate from the ocean
- (c) They are essential for agriculture and life
- (d) They cause cyclones

(iv) Cyclones are characterised by which of the following features ?

- (a) Very strong winds and heavy rainfall
- (b) Mila breezes and light rain
- (c) Extremely low temperatures
- (d) Gentle waves and calm weather

Ans. : (i) Cyclones

(ii) By providing essential rainfall during the monsoon season

(iii) They are essential for agriculture and life

(iv) Very strong winds and heavy rainfall

*** Long answer questions [5 Mark each]**

[20]

145. What are oceans and continents? What are their names and their distribution?

Ans. : The Earth's surface is divided into oceans and continents of which almost three-fourths is covered with water and 1 /4th with land. 97% of this water is in Oceans. That is why, Earth is called the 'Blue planet'.

1. The largest water bodies, we see on the globe are called 'Oceans'. They are all interconnected and level of water remains same everywhere (MSL i.e. Mean Sea Level).

2. A large continuous expanse of land is called a continent.

3. There are five major Oceans of the world from the largest to the smallest they are :

- (a) The Pacific Ocean.
- (b) The Atlantic Ocean.
- (c) The Indian Ocean.
- (d) The Southern Ocean.
- (e) The Arctic Ocean.

4. The Pacific Ocean is the largest and spreads on about 30% area of the earth.

5. It is circular in shape. The world's deepest part of the earth - Mariana Trench lies

under the Pacific Ocean.

6. It is bounded by Asia and Australia on one side and North the South America on the other.

7. The Atlantic Ocean is the second largest and is 'S' shaped.

- It is flanked by the North and South America's on the western side and Europe and Africa on the eastern side.

- It has a highly irregular indented coastline helpful in {development of natural harbours.

- It is the busiest ocean from the point of commerce.

The Indian Ocean is the third largest and only Ocean named after a country (India/Bharat). It is shaped almost like a triangular.

- Its limits are Asia to the North, Africa to the West and Australia to the East and Southern Ocean in the South.

- The Arabian sea to the west and the Bay of Bengal to the east are part of it.

The southern Ocean is the Ocean around the continent of Antarctica.

- It means the waters of the Atlantic, Pacific and Indian Oceans around the continent.

- 60°S is often accepted as its location.

- Some people call this Ocean the Antarctic Ocean.

The Arctic Ocean is smallest of all the Oceans and is located within the Arctic Circle and surrounds the North Pole.

It is actually a northward extension of the Atlantic Ocean.

- A narrow water body, Bering Strait connects it with the Pacific Ocean.

It is bound by the northern coasts of North America and Eurasia in the North.

There are seven continents. In order of size they are: Asia, Africa, North America, South America, Antarctica, Europe, and Australia.

- Asia: It occupies about 1/3 rd of the Earth land area. It is separated from Europe by the Ural Mountains. Asia and Europe together are known as Eurasia. Asia is surrounded on three sides by oceans- Arctic (N) Pacific (E) & Indian (S).

- Africa : Three important latitudes pass through it - Tropic of Cancer, the Equator and Tropic of Capricorn. The Prime Meridian too passes through this landmass. Like Asia it is bound on three sides by water bodies. The Suez Canal separates Asia and Africa today.

- North America : North America is bound by three oceans -the Arctic(N), the Atlantic (E) and the Pacific oceans While earlier the Panama Isthmus joined N & S Americas today it separates them.

- South America : It too is surrounded by oceans on almost all sides- e.g. Pacific Ocean on the west • side and Atlantic Ocean on the east, the Southern Ocean in the South.

- Antarctica : This continent lies to the extreme end of the Southern Hemisphere. The South Pole is almost at the centre. Its other names are frozen continent or the

white continent as it is permanently covered with ice. Out of all the continents here people do not live on a permanent basis.

Europe : It is joined to the continent of Asia. In the north it is bound by the Arctic Ocean, west by the Atlantic Ocean and south by the Mediterranean Sea. Australia: It is the smallest of the seven continents. It is bound on all sides by seas and oceans and thus also known as island continent.

146. In what ways do oceans and continents impact life on Earth, including human life?

Ans. : Oceans and continents impact life on Earth including human life in a number of ways.

- They play a vital role in shaping the climate, of the Earth. Oceans through currents transport heat from the equator to the poles regulating our climate.
- 98% of the heat from Sun's rays are absorbed by the Oceans.
- They help send rain to the continents. They are a part of the water cycle which sustains agriculture, life on earth and replenishes the useable fresh water resources.
- Our Oceans produce over half the world's oxygen we breathe and captures an estimate of 40% of the CO₂ produced which is why they are called 'planets lungs'.
- The Oceans feed us, example- fishes. Its biodiversity provide one global community with animal protein. In many developed countries seafood is the primary source of protein.
- Oceans provide jobs and livelihoods. From early times people have used oceans and seas to migrate to other regions, to trade in all kinds of goods and to conduct military campaign; and exchange ideas.
- Oceans have impacted history and culture, example seafarers, discovery of sea routes to various continents led to colonisation and imperialisation- even to enslavement.
- However Oceans are not all a story of gains. Oceans give rise to violent events with extreme rainfall, or strong winds such as cyclones which cause widespread damage to men and material.
- Tsunami, a natural disaster originates in the ocean. The sea waves travel thousands of km, submerge coastal areas and cause loss of life and property.

Like Oceans continents too impact life on Earth. Continents (7) are home to various landforms-mountains, plains, plateaus, deserts. They support varied plant and animal life giving rise to many interesting eco systems in nature.

- The soil cover provides us various forms of vegetation like, forests and grasslands for grazing, agriculture and human settlements.
- Continents along with oceans are a rich source of minerals essential for economic development.

The landmass supports all structures like buildings, roads, rails, that are essential for living and transport.

- Continents are home to vast variety of fauna. The animals range from tigers to

lizards to moles bacteria and organisms that live underground and overground.

• The vast and ever growing human population with its wasteful, modern life style and green house gases to contributing climate change, inturn impacts life in oceans and on continents. What is needed is a sustainable way of life.

147. What ways of saving water are you aware of? Which ones have you seen practised at home, at your school, and in your village, town or city?

Ans. : The different ways of saving water as follows

(a) **Rainwater harvesting** it is the process of storing rainwater for future use. This rainwater can be stored in the tanks till the next rainfall.

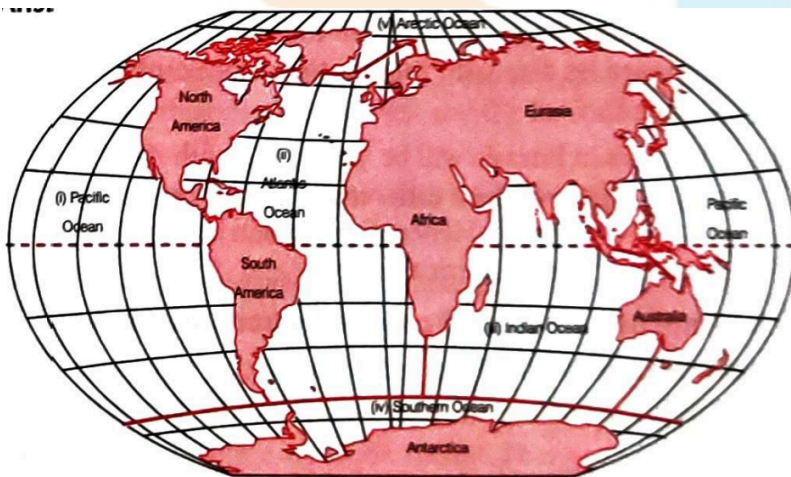
(b) **Recycling waste water** it involves treating and reusing water that has already been used for various purposes.

(c) **Drip irrigation** it is the process of delivering water directly to the roots of plants through small tubes and emitters.

148. Locate the five oceans in the table below, mark the hemisphere or hemispheres they belong to.

	Northern Hemisphere	Southern Hemisphere
Pacific Ocean		
Atlantic Ocean		
Indian Ocean		
Southern Ocean		
Arctic Ocean		

Ans. :



	Northern Hemisphere	Southern Hemisphere
Pacific Ocean	Yes	Yes
Atlantic Ocean	Yes	Yes
Indian Ocean		Yes
Southern Ocean		Yes
Arctic Ocean	Yes	

The earth is called the blue planet. More than 71% of the earth is covered with water and 29% is with land. Hydrosphere consists of water in all its forms. As running water in oceans and rivers and in lakes, ice in glaciers, underground water and the water vapour in atmosphere all comprise the hydrosphere. More than 97% of the Earth's water is found in the oceans and is too salty for human use. A large proportion of the rest of the water is in the form of ice sheets and glaciers or under the ground and a very small percentage is available as fresh water for human use. Hence, despite being a 'blue planet' we face a shortage of water!! Oceans— Oceans are the major part of hydrosphere. They are all interconnected. The ocean waters are always moving. The three chief movements of ocean waters are the waves, the tides and the ocean currents. The five major oceans are the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean and the Arctic Ocean, in order of their size.

The Pacific Ocean is the largest ocean. It is spread over one third of the earth. Mariana Trench, the deepest part of the earth, lies in the Pacific Ocean. The Pacific Ocean is almost circular in shape. Asia, Australia North and South America surround it. It is flanked by the North and South America on the western side, and Europe and Africa on the eastern side. The Atlantic Ocean is the second-largest ocean in the world. It is 'S' shaped and is highly indented. This irregular and indented coastline provides an ideal location for natural harbours and ports. From the point of view of commerce, it is the busiest Ocean. The Indian Ocean is the only ocean named after a country, that is, India. The shape of the ocean is almost triangular. In the north, it is bound by Asia, in the west by Africa and in the east by Australia. The Southern Ocean encircles the continent of Antarctica and extends northward to 60 degrees south latitude. The Arctic Ocean is located within the Arctic Circle and surrounds the North Pole. It is connected with the Pacific Ocean by a narrow stretch of shallow water known as the Bering Strait. It is bound by northern coasts of North America and Eurasia.

Q.1. What percentage of earth's covered with water?

- (a) 29% (b) 71% (c) 30% (d) 100%

149. What are the chief movements of ocean?

- (a) The waves (b) The tides (c) The ocean currents (d) All of these

150. Which is the largest ocean?

- (a) Atlantic ocean (b) Pacific ocean (c) Indian ocean (d) Arctic ocean

151. Which is the 'S' shaped ocean?

- (a) Indian ocean (b) Pacific ocean (c) Arctic ocean (d) Atlantic ocean

Ans. : 1.B. 71%

Explanation.

The earth is called the blue planet. More than 71% of the earth is covered with water



and 29% is with land.

2.D. All of these

Explanation.

The three chief movements of ocean waters are the waves, the tides and the ocean currents.

3.B. Pacific ocean

Explanation.

The Pacific Ocean is the largest ocean. It is spread over one-third of the Earth. Mariana Trench, the deepest part of the earth, lies in the Pacific Ocean.

4.D. Atlantic ocean

Explanation.

The Atlantic Ocean is the second- largest ocean in the world. It is 'S' shaped ocean and is highly indented.

The solid portion of the earth is called the lithosphere. It comprises the rocks of the earth's crust and the thin layers of soil that contain nutrient elements which sustain organisms. There are two main divisions of the earth's surface. The large landmasses are known as the continents and the huge water bodies are called the ocean basins. All the oceans of the world are connected with one another. The level of seawater remains the same everywhere. Elevation of land is measured from the level of the sea, which is taken as zero. The highest mountain peak Mt. Everest is 8,848m above the sea level. The greatest depth of 11,022 m is recorded at Mariana Trench in the Pacific Ocean. There are seven major continents. These are separated by large water bodies. These continents are – Asia, Europe, Africa, North America, South America, Australia and Antarctica. Asia is the largest continent. It covers about one-third of the total land area of the earth. The continent lies in the Eastern Hemisphere. The Tropic of Cancer passes through this continent. Asia is separated from Europe by the Ural mountains on the west. The combined landmass of Europe and Asia is called the Eurasia (Europe + Asia). Europe is much smaller than Asia. The continent lies to the west of Asia. The Arctic Circle passes through it.

It is bound by water bodies on three sides. Look at the map of the world and locate it. Africa is the second largest continent after Asia. The Equator or 0° latitude runs almost through the middle of the continent. A large part of Africa lies in the Northern Hemisphere. It is the only continent through which the Tropic of Cancer, the Equator and the Tropic of Capricorn pass. The Sahara Desert, the world's largest hot desert, is located in Africa. The continent is bound on all sides by oceans and seas. The world's longest river, the Nile, flows through Africa. North America is the third largest continent in the world. It is linked to South America by a very narrow strip of land called the Isthmus of Panama. The continent lies completely in the Northern and Western Hemisphere. Three oceans surround this continent. The Andes, world's longest mountain range, runs through its length from north to south. South America has the world's largest river, the Amazon. Australia is the smallest



continent that lies entirely in the Southern Hemisphere. It is surrounded on all sides by the oceans and seas. It is called an island continent. Antarctica, completely in the Southern Hemisphere, is a huge continent. The South Pole lies almost at the centre of this continent. As it is located in the South Polar Region, it is permanently covered with thick ice sheets. There are no permanent human settlements. Many countries have research stations in Antarctica. India also has research stations there. These are named as Maitri and Dakshin Gangotri.

Q.1. Which domain has solid portion on the earth?

- (a) Lithosphere (b) Atmosphere (c) Hydrosphere (d) All of these

152. Where is Mariana Trench located?

- (a) Atlantic ocean (b) Pacific ocean
(c) Indian ocean (d) None of these

153. The combined landmass of which continent is known as Eurasia?

- (a) Europe - Asia (b) Europe + Antarctica
(c) Asia + North America (d) Africa + Europe

154. The Sahara Desert, the world's largest hot desert, is located in:

- (a) Africa (b) Europe (c) Australia (d) Asia

Ans. : 1.D. All of these

Explanation.

The solid portion of the earth on which we live is called the lithosphere. It comprises the rocks of the earth's crust and the thin layers of soil that contain nutrient elements which sustain organisms.

2.B. Pacific ocean

Explanation.

The greatest depth of 11,022 m is recorded at Mariana Trench in the Pacific Ocean.

3.A. Europe - Asia

Explanation.

Asia is separated from Europe by the Ural Mountains on the west. The combined landmass of Europe and Asia is called the Eurasia (Europe + Asia). Europe is much smaller than Asia.

4.A. Africa

Explanation.

Africa is home to the world's largest scorching desert, the Sahara Desert. The oceans and seas encircle the continent on all sides. Africa is home to the Nile, the longest river in the world.

* Match the following.

[20]

155.

Column A	Column B
1. Maitri	(a) Surrounded by water on all sides
2. Australia	(b) Caused by Earthquake or Volcanic eruption at the bottom of the ocean

3. Islands	(c) Scientific base station
4. Algae	(d) Smallest continent
5. Tsunami	(e) Flora

Ans. :

Column A	Column B
1. Maitri	(c) Scientific base station
2. Australia	(d) Smallest continent
3. Islands	(a) Surrounded by water on all sides
4. Algae	(e) Flora
5. Tsunami	(b) Caused by Earthquake or Volcanic eruption at the bottom of the ocean

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List I	List II
A. Oceans	1. The plant life is found in the oceans.
B. Continents	2. The large continuous expanse of land on Earth.
C. Water cycle	3. The process by which water circulates between the Earth's oceans, atmosphere and land.
D. Marine flora	4. Large bodies of saltwater cover most of the Earth's surface.
E. Marine fauna	5. Animal life is found in the oceans.

Ans. :

List I	List II
A. Oceans	4. Large bodies of saltwater cover most of the Earth's surface.
B. Continents	2. The large continuous expanse of land on Earth.
C. Water cycle	3. The process by which water circulates between the Earth's oceans, atmosphere and land.
D. Marine flora	1. The plant life is found in the oceans.
E. Marine fauna	5. Animal life is found in the oceans.

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Column A	Column B
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(1) The Blue Planet	(a) The largest ocean
(2) Pacific Ocean	(b) Caused by underwater earthquakes or volcanic eruptions
(3) Sam noh Varunah	(c) Earth's nickname due to its appearance from space
(4) Tsunami	(d) The coldest continent
(5) Antarctica	(e) Indian Navy's motto invoking a deity associated with oceans

Ans. :

Column A	Column B
(1) The Blue Planet	(c) Earth's nickname due to its appearance from space
(2) Pacific Ocean	(a) The largest ocean
(3) Sam noh Varunah	(e) Indian Navy's motto invoking a deity associated with oceans
(4) Tsunami	(b) Caused by underwater earthquakes or volcanic eruptions
(5) Antarctica	(d) The coldest continent

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Column A	Column B
(1) First scientific base station	(i) Arctic
(2) The largest island in the world	(ii) Gulf
(3) On 26 December 2004	(iii) Greenland
(4) Smallest ocean	(iv) 'Dakshin Gangotri'
(5) A part of the sea nearly surrounded with land	(v) Powerful Tsunami

Ans. :

Column A	Column B
(1) First scientific base station	(iv) 'Dakshin Gangotri'
(2) The largest island in the world	(iii) Greenland
(3) On 26 December 2004	(v) Powerful Tsunami
(4) Smallest ocean	(i) Arctic
(5) A part of the sea nearly surrounded with land	(ii) Gulf

Student Bro

