

# Chapter - 2

## Oceans and Continents

### Q.1 Facts that Matter

- 1. What are Oceans?** : Oceans are vast, interconnected bodies of saltwater that cover most of Earth's surface with the Ocean water constantly moving through currents, waves, and tides, which helps to distribute heat and nutrients worldwide.
- 2. Distribution of water** : Water is distributed in the Oceans, as freshwater, in Glaciers & ice caps, as Groundwater, on the Surface (lakes, rivers, etc.) and only 1% of Earth's water is easily accessible for human use.
- 3. Define Continent:** A continent is a large, continuous mass of land that is typically separated by oceans. These landmasses host diverse ecosystems, cultures, and geographical features.
- 4. How were the continents formed?** : Continents were formed through geological processes over billions of years and are still moving today, at a rate of a few centimetres per year — meaning Earth's surface will continue to change over time.
- 5. Role of Humans in depletion of Oceans** : Human activities are stressing ocean ecosystems- pollution, overfishing, and climate change threaten marine life and coastal communities.
- 6. Link of oceans and disasters** : Oceans and disasters are closely linked - the vast, dynamic nature of the world's oceans can both create and amplify natural disasters.

### Q.2 Multiple Choice Questions

- 1. Which is the largest ocean in the world?**  
c) Pacific Ocean
- 2. The continent through which the Prime Meridian passes is\_\_\_\_\_.**  
b) Europe
- 3. Which continent is completely covered with ice?**  
b) Antarctica
- 4. The largest island in the world is\_\_\_\_\_.**  
b) Greenland
- 5. In which direction does the Atlantic Ocean lie in context of Africa?**  
b) West
- 6. Which ocean is named after a country?**  
a) Indian Ocean
- 7. Tsunamis are generally caused by\_\_\_\_\_**

- b) Earthquakes or volcanic eruptions under the sea
8. **What do the five Olympic rings symbolise?**  
b) Five inhabited continents
9. **Arrange the continents in descending order of size.**  
d) IV, II, III, I
10. **The ocean surrounding Antarctica is\_\_\_\_\_.**  
c) Southern Ocean

**Q.3 Study the picture, and answer the questions that follow**

1. **Identify the continents located in the Northern Hemisphere.**  
Its contains 67% of Earth Landmasses- North America, Europe, Asia, 2/3 of Africa and small portion of South America.
2. **Name the oceans surrounding these continents.**  
Pacific, Atlantic, Indian, and Arctic.
3. **Name the Smallest and the largest Continent.**  
Australia smallest and Asia Largest.

**Q.4 Write the correct statement for each incorrect statement given below.**

1. **The shape of the Pacific Ocean is 'S' shaped.**  
The shape of the Pacific Ocean is circular.
2. **India started the Indian Antarctica programme in 1982 and established its first scientific research base station in 1983 called 'Dakshin Gangotri'.**  
India started the Indian Antarctica Programme in 1981.
3. **The emblem of the Indian Navy motto invokes the Sun God.**  
The emblem of the Indian Navy motto invokes the deity Varuna.
4. **The marine fauna includes tiny plants called algae and all kinds of seaweeds.**  
Flora
5. **The large body of land is called 'gulf'. A large continuous expanse of land is called a 'continent'.**  
Landmass

**Q.5 Match the items given in Column A with their correct pair in Column B.**

- | Column A        | Column B  |
|-----------------|---|
| 1. Arctic Ocean | C. Europe and Asia  |
| 2. Eurasia      | D. Europe and Asia  |
| 3. Fauna        | E. The animal life of a particular region or period of time |

- |    |        |           |   |
|----|--------|-----------|---|
| 4. | Marine | <b>A.</b> | <b>Related to or found in the oceans and seas</b> |
| 5. | Oceans | <b>B.</b> | <b>Largest water bodies</b>                       |

### Q.6 Assertion & Reason based Questions

- 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.

#### Choose the correct option

- 1. **Assertion (A)** : Greenland is the largest island in the world.  
**Reason (R)** : India's two major groups of islands are Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep in the Arabian Sea.
- 2. **Assertion (A)** : Events like natural disasters that cause loss of life and property are managed by disaster management authority.  
**Reason (R)** : India does not have any national disaster management authority to handle such natural disasters and minimise the damage.

- 1. **b) Both A and R are true, but R is not the correct explanation of A.**
- 2. **c) A is true, but R is false.**

### Q.7 Case Study Based Question

Read the paragraph given below and answer the following questions.

**a. How is tsunami caused?**

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

**b. What is the purpose of the Indian Ocean Tsunami Warning System?**

The purpose of the Indian Ocean Tsunami Warning System is to detect tsunamis early and help protect lives and property.

**c. Name one more natural disaster associated with oceans.**

Cyclones

### Q.8 Answer the following questions.

- 1. **What led to the establishment of the Indian Ocean Tsunami Warning System?**  
The Tsunami of 26 th December, 2004 led to the establishment of the Indian Ocean Tsunami Warning System.
- 2. **Why is seawater unfit for drinking?**  
The seawater is unfit for drinking because it is salty and contains minerals unsuitable for human consumption.
- 3. **Name the oceans that lie in the Northern Hemisphere.**

The oceans that lie in northern hemisphere are Pacific ocean, Atlantic ocean, Indian ocean and Arctic ocean.

**4. When and why is the World Ocean Day celebrated?**

On 8th June every year we celebrate World Ocean Day to remind us all of the major role the ocean plays in our everyday life. They serve as the lungs of our planet, a major source of food and medicine and a critical part of the biosphere.

**5. Give one difference between continents and islands.**

Continents are large landmasses surrounded by oceans, while islands are smaller pieces of land surrounded by water.

**6. What threats do oceans face today?**

Human activities have led to the pollution of oceans in the following ways:-

- a. **Plastic pollution** -Throwing of several million tonnes of plastic wastes every year leading to choking of marine life.
- b. **Excessive fishing** - Overfishing has led to decline in marine life, Chemicals, fertilisers etc used in industries, agriculture and trash are intentionally dumped into oceans.
- c. **Warming:** 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.

**7. Define are oceans How much of the Earth do they cover?**

Oceans are large bodies of saltwater that dominate the Earth's surface, including the Pacific, Atlantic, and Indian Ocean. They cover nearly three-fourths of the Earth's surface, leaving just over one-fourth covered by land. The oceans are interconnected systems without real separations, playing a crucial role in climate regulation, supporting diverse marine life, and facilitating global water cycles.

**8. 'All Oceans are interconnected'. Explain.**

Yes, all the five oceans are interconnected.

Some are connected via the Arctic Ocean. Example: The narrow water body named Bering Strait connects the Pacific and the Arctic Ocean.

Still others are connected by the narrow gap between the land masses of South America and the Antarctica.

**9. 'Oceans are integral to sustenance of life on Earth'. Discuss.**

- i) Oceans regulate the Earth's climate and provide rainfall.
- ii) They also influence weather patterns and are crucial for the water cycle.
- iii) They produce more than half the world's oxygen thus supporting marine biodiversity.
- iv) They facilitate trade and travel.
- v) They provide food, and shape coastal cultures

**10. How are continents counted differently? Which system is most widely accepted?**

The different ways continents are counted and the most widely accepted number is-

**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 (most widely accepted).

**Values in real-life contents**

- Ans. A)**
1. Excessive use of pesticides and insecticides.
  2. Industrial waste is thrown into the water bodies.
  3. Plastic waste is dumped into the water bodies.
  4. Oil spills in the oceans.
  5. Domestic waste pollutes the water bodies.
- B)** I was speechless seeing the barren land, the air was heavy and polluted, there was scorching heat leaving everyone restless. The Earth looked cracked and dry. It was certainly a 'Death Trap'.
- C)** Children to understand the concept & enhance the Handbill with their creativity.
- D)**
1. Plant more trees
  2. Optimum use of chemicals & fertilizers
  3. Controlled urbanization
  4. Control on air and land pollution