

CBSE CLASS 6 | SOCIAL SCIENCE

Oceans and Continents

*Case Study Based Questions***Set A: Case Study Based Questions**

5 Case Studies × 3 Questions each = 15 Questions (3 marks each)

Case Study 1

Meera looked at a photograph of the Earth taken from space and noticed that most of the planet appeared blue, with only small patches of brown. Her teacher explained that this is because a very large part of the Earth's surface is covered with water, while land makes up a much smaller portion. Early astronauts were so struck by this that they began calling the Earth the 'blue planet'.

1.1. What does the blue colour seen from space represent, and what does the brown colour represent?

1.2. Why did early astronauts call the Earth the 'blue planet'?

1.3. Name the largest water bodies seen on the globe.

Case Study 2

A group of students was preparing a project on the world's oceans. They found that the map showed five oceans, but their teacher pointed out that these are not really separate — the lines dividing them are only conventions, since seawater constantly flows between them, and many plant and animal species are found across more than one ocean.

2.1. Name the five oceans mentioned on the world map.

2.2. Why does the teacher say that the oceans are 'not really separate'?

2.3. Arrange the five oceans in order of size, from largest to smallest.

Case Study 3

On 26 December 2004, a massive earthquake under the Indian Ocean near Indonesia triggered a tsunami that struck India and thirteen other countries. More than two lakh people lost their lives. In India, the Andaman and Nicobar Islands and the coasts of Tamil Nadu and Kerala were the worst affected. Since then, countries around the Indian Ocean have worked together to set up early warning systems.

3.1. What natural event caused the 2004 tsunami, and where did it originate?

3.2. Which parts of India were most severely affected by the tsunami?

3.3. What step have countries around the Indian Ocean taken since 2004 to reduce the impact of future tsunamis?

Case Study 4

Rohan was surprised to learn that the number of continents in the world is not always the same. His book explained that continents can be counted in different ways — sometimes as few as four and sometimes as many as seven — depending on whether

connected landmasses like North and South America, or Europe and Asia, are counted separately or together.

4.1. Why does the number of continents vary between four and seven?

4.2. List the seven continents according to the most widely used count.

4.3. What do geologists often call the combined landmass of Europe and Asia?

Case Study 5

India has been active in Antarctica since 1981 through the Indian Antarctica Programme. In 1983, the country set up its first research station there, called 'Dakshin Gangotri', and later built two more bases. About 40 teams of Indian scientists have worked in this cold and remote continent, mainly studying the climate and environment.

5.1. Since which year has India been exploring Antarctica, and under what programme?

5.2. What was India's first research station in Antarctica called, and when was it set up?

5.3. What kind of research have Indian scientific teams mainly focused on in Antarctica?

ANSWER KEY — Set A**Case Study 1**

1.1. The blue colour represents water (oceans), which covers almost three-fourths of the Earth's surface, while the brown colour represents land, which covers a little over one-fourth of the surface.

1.2. They called it the 'blue planet' because, when seen from outer space, the Earth appears mostly blue due to the large water bodies covering most of its surface.

1.3. The largest water bodies seen on the globe are called oceans.

Case Study 2

2.1. The five oceans are the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Arctic Ocean, and the Southern (or Antarctic) Ocean.

2.2. The lines dividing the oceans on maps are only conventions; in reality, seawater flows freely between different oceans and many species of marine life are found across multiple oceans.

2.3. From largest to smallest: Pacific Ocean, Atlantic Ocean, Indian Ocean, Southern Ocean, and Arctic Ocean.

Case Study 3

3.1. The 2004 tsunami was caused by a powerful earthquake under the Indian Ocean, near Indonesia.

3.2. The Andaman and Nicobar Islands and the coasts of Tamil Nadu and Kerala were severely affected.

3.3. They have set up an early warning system, called the Indian Ocean Tsunami Warning System, in which many countries, including India, collaborate to detect tsunamis before they hit the coast.

Case Study 4

4.1. The number varies because some landmasses, such as North and South America or Europe and Asia, are physically connected and can be counted either as one continent or as two, depending on the convention used.

4.2. The seven continents are Africa, Antarctica, Asia, Australia, Europe, North America and South America.

4.3. Geologists often call the combined landmass of Europe and Asia 'Eurasia'.

Case Study 5

5.1. India has been exploring Antarctica since 1981, under the Indian Antarctica Programme.

5.2. India's first research station in Antarctica was called 'Dakshin Gangotri', set up in 1983.

5.3. Indian scientific teams have mainly focused on research related to the evolution of climate and environment.

Set B: Case Study Based Questions

5 Case Studies × 3 Questions each = 15 Questions (3 marks each)

Case Study 1

A fisherman's family living on the coast of Kerala depends on the sea for their livelihood. Every day, they go fishing in the Arabian Sea, part of the Indian Ocean. They have noticed that catches have become smaller over the years, and their elders say that too many boats are now fishing in the same waters, along with growing pollution from plastic waste along the shore.

1.1. Which ocean and which of its parts does this fisherman's family depend on?

1.2. What term describes the problem of too many boats fishing in the same waters, reducing catches?

1.3. Name one other threat to marine life mentioned in the passage.

Case Study 2

During a school trip, students visited a small island where the land was completely surrounded by water on all sides. Their guide told them that although continents are also surrounded by water, they are so large that they are never called islands, while smaller landmasses like the one they were visiting are.

2.1. What is the key difference between a continent and an island, according to the guide?

2.2. Name the largest island in the world.

2.3. Name India's two major groups of islands and the seas in which they are located.

Case Study 3

A science exhibition had a display explaining that oceans are sometimes called the 'planet's lungs'. The display showed tiny algae and other marine plants and explained that these produce more than half of the world's oxygen, in addition to oceans playing a major role in bringing rainfall to the continents.

3.1. Why are oceans called the 'planet's lungs'?

3.2. How do oceans contribute to rainfall on the continents?

3.3. What would happen to the Earth without oceans, according to the chapter?

Case Study 4

Every year on 8 June, schools around the world observe World Oceans Day. The United Nations describes the day as a reminder of the major role the ocean plays in everyday life, serving as the lungs of the planet, a major source of food and medicine, and a critical part of the biosphere.

4.1. On which date is World Oceans Day observed, and by which organisation was it designated?

4.2. According to the UN description, name two roles that oceans play in everyday life.

4.3. Why do you think it is important to have a day dedicated to oceans?

Case Study 5

A group of students studying the Indian Navy's emblem found that it carries the motto 'Sam noh Varunah', meaning 'Be auspicious to us, O Varuna'. Their teacher explained that Varuna is a Vedic deity associated with the oceans, sky and water, showing how oceans have long been connected with Indian culture and belief.

5.1. What does the motto 'Sam noh Varunah' on the Indian Navy's emblem mean?

5.2. Who is Varuna, according to the passage?

5.3. What does this example show about the relationship between oceans and human culture?

ANSWER KEY — Set B**Case Study 1**

- 1.1.** They depend on the Indian Ocean, specifically the Arabian Sea, which lies on the western coast of India.
- 1.2.** This is called overfishing — excessive fishing that leads to the decline of marine life.
- 1.3.** Pollution from plastic waste along the shore is another threat to marine life mentioned in the passage.

Case Study 2

- 2.1.** Both continents and islands are surrounded by water, but continents are so large that they are not considered islands; islands are much smaller pieces of land.
- 2.2.** Greenland is the largest island in the world.
- 2.3.** India's two major island groups are the Andaman and Nicobar Islands, located in the Bay of Bengal, and the Lakshadweep Islands, located in the Arabian Sea.

Case Study 3

- 3.1.** Oceans are called the 'planet's lungs' because more than half of the world's oxygen is produced by the oceans' flora, such as algae.
- 3.2.** Oceans are part of the Earth's water cycle; moisture from the oceans forms clouds that bring rain to the continents.
- 3.3.** Without oceans, there would be no rainfall, and the Earth would become a desert.

Case Study 4

- 4.1.** World Oceans Day is observed on 8 June, and it was designated by the United Nations.
- 4.2.** According to the UN, oceans serve as the 'lungs of our planet' and are a major source of food and medicine.
- 4.3.** A dedicated day helps raise awareness about the importance of oceans for climate, food, biodiversity and human life, and encourages people to protect them from pollution and overfishing.

Case Study 5

- 5.1.** It means 'Be auspicious to us, O Varuna', an invocation to the sea deity Varuna.
- 5.2.** Varuna is a Vedic deity associated with the oceans, the sky, and water in general.
- 5.3.** It shows that oceans have deeply influenced human culture and belief systems for a very long time, including in Indian tradition, where the sea has been honoured through deities and symbols.

Set C: Case Study Based Questions

5 Case Studies × 3 Questions each = 15 Questions (3 marks each)

Case Study 1

A geography class was shown two maps of the Earth: one viewed from above the North Pole and another from above the South Pole. The teacher pointed out that oceans and continents are not spread equally across the two hemispheres, and asked the students to compare how much water and land each hemisphere holds.

1.1. Which hemisphere has more land, according to the chapter — Northern or Southern?

1.2. Are oceans and continents distributed equally between the two hemispheres?

1.3. Name two smaller extensions of oceans mentioned in the chapter, besides oceans themselves.

Case Study 2

A group of Indian scientists prepared to travel to Antarctica for research. Before leaving, they studied the continent's harsh, icy environment and learnt that India has been sending research teams there since 1981, with a settlement that even has its own library and post office.

2.1. What kind of environment does Antarctica have, according to the passage?

2.2. Since when has India been sending scientific teams to Antarctica?

2.3. What interesting facilities does the Indian settlement in Antarctica have?

Case Study 3

On the Olympic flag, five interlocking rings are shown, each of a different colour. Students learnt that these rings symbolise the coming together of sportspeople from around the world and represent five continents that are inhabited by people.

3.1. What do the five Olympic rings symbolise?

3.2. Name the five inhabited continents represented by the Olympic rings.

3.3. Why do you think Antarctica is not included among the continents represented by the Olympic rings?

Case Study 4

A coastal town was hit by a sudden storm with extremely strong winds and heavy rainfall, causing damage to homes and boats. Local news reports called it a 'cyclone' and explained that such storms often originate in the ocean and can cause widespread destruction to coastal regions.

4.1. What is a cyclone, according to the chapter?

4.2. Where do cyclones typically originate?

4.3. Name another ocean-related natural disaster mentioned in the chapter, besides cyclones.

Case Study 5

A textbook diagram showed the relative sizes of the seven continents using squares, without showing their actual shapes. Students were asked to count the squares to identify the largest and smallest continents and to compare pairs, such as North America and South America.

5.1. What was the purpose of the square-based diagram of continents?

5.2. Which continent is the largest, and which is the smallest, among the seven?

5.3. Why is comparing continent sizes using such a diagram useful for students?

ANSWER KEY — Set C**Case Study 1**

- 1.1.** The Northern Hemisphere has more land than the Southern Hemisphere.
- 1.2.** No, oceans and continents are not distributed equally between the Northern and Southern Hemispheres.
- 1.3.** Two smaller extensions of oceans mentioned in the chapter are 'sea', 'bay' and 'gulf' (any two of these).

Case Study 2

- 2.1.** Antarctica has a very cold climate and a harsh environment.
- 2.2.** India has been sending scientific teams to Antarctica since 1981, through the Indian Antarctica Programme.
- 2.3.** The Indian settlement in Antarctica has a library and even a post office.

Case Study 3

- 3.1.** The five Olympic rings symbolise the gathering of sportspeople from all over the world.
- 3.2.** The five inhabited continents represented are Africa, America, Asia, Australia and Europe.
- 3.3.** Antarctica is not included because it is not permanently inhabited by people, unlike the other continents.

Case Study 4

- 4.1.** A cyclone is a violent storm with extreme rainfall or very strong winds that can cause widespread damage to coastal regions.
- 4.2.** Cyclones typically originate in the ocean.
- 4.3.** A tsunami is another ocean-related natural disaster mentioned in the chapter.

Case Study 5

- 5.1.** The purpose was to show the relative sizes of the seven continents, not their actual shapes.
- 5.2.** Asia is the largest continent, and Australia is the smallest, among the seven continents.
- 5.3.** It helps students visually understand and compare the relative sizes of continents without needing to interpret complex map shapes.