

OCEANS AND LIFE

NCERT Exercise Solutions

Understanding Society: India and Beyond • Grade 9 Part 2 • New Syllabus 2026–27

Chapter 1 – Questions and Activities

Complete, student-friendly solutions to the 9 questions shown in the prescribed textbook exercise.

Q1. How do different features of the ocean floor affect human activities such as fishing, transport, and underwater exploration?

Answer: Different features of the ocean floor affect human activities in different ways. **Continental shelves** are relatively shallow and nutrient-rich, making many of them important fishing grounds. They may also contain petroleum, natural gas and other resources. **Continental slopes** are steeper and can make navigation and underwater exploration more challenging. **Abyssal plains** provide broad deep-ocean areas, while their great depth makes exploration more difficult. **Mid-ocean ridges, trenches, seamounts and submarine canyons** are important for scientific and geological exploration and can influence marine habitats and the movement of sediments. Thus, ocean-floor features affect fishing, navigation, resource use and underwater research.

Q2. How do waves, tides, and ocean currents influence climate, marine life, and human activities around the world?

Answer: Waves, tides and ocean currents constantly move ocean water and influence both natural systems and human activities. **Waves** affect coastlines through erosion and deposition and can also provide wave-energy opportunities. **Tides** cause the regular rise and fall of sea level and are important for navigation, fishing, coastal activities and tidal-energy generation. **Ocean currents** transport heat and nutrients between regions. They influence climate, coastal temperatures, marine ecosystems and fishing grounds. Therefore, ocean-water movements connect the oceans with climate, marine life, coastal environments and human livelihoods.

Q3. Describe the importance of marine resources.

Answer: Marine resources are important because oceans provide a wide range of resources that support people and ecosystems. They provide **food** such as fish and other marine organisms; **livelihoods** through fishing, aquaculture, tourism, shipping and related activities; and **minerals and energy resources** such as seabed minerals, oil and natural gas. Oceans also offer renewable energy from offshore wind, tides, waves and ocean currents. Marine organisms can contribute to scientific research and biotechnology. Oceans are also major routes for international trade. These resources should be used sustainably to protect marine ecosystems for future generations.

Q4. Draw a poster that encourages people to protect marine resources. Include a slogan and explain your message in 2–3 sentences.

Answer: Poster slogan:

■ **SAVE OUR SEAS — SAVE OUR FUTURE!** ■

Message: Oceans provide food, livelihoods and valuable resources, but pollution and unsustainable activities can damage marine ecosystems. We should reduce pollution, protect marine life and use ocean resources responsibly so that future generations can benefit from healthy oceans.

Q5. Using a map of India, mark at least five coastal states that might need tsunami warning systems.

Answer: Five or more coastal states that can be marked on an India map are: **Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal.** The **Andaman and Nicobar Islands** are also important for tsunami monitoring because of their location in the Indian Ocean region.

Q6. Work in a group and act out what would happen when a cyclone warning is issued. Highlight what role different people, like scientists, officials, and coastal villagers, would play.

Answer: When a cyclone warning is issued, different groups work together. **Scientists and meteorologists** monitor the cyclone using satellites, weather observations and forecasting systems and provide information about its movement and intensity. **Government and disaster-management officials** communicate warnings, arrange shelters and organise evacuation. **Police and emergency workers** assist with evacuation, traffic management and rescue. **Coastal villagers** follow official instructions, move to safer locations when required, secure boats and belongings, and help vulnerable people. **Medical and relief teams** prepare emergency supplies and assistance. Effective disaster management depends on early warning, clear communication, preparedness and cooperation.

Q7. Suppose a foreign ship is sailing through India's territorial sea. What principle allows the ship to pass through these waters, subject to certain conditions?

Answer: The principle is called **innocent passage**. Under the law of the sea, foreign ships have a right of innocent passage through the territorial sea, provided that their passage meets the conditions established under international law and does not prejudice the peace, good order or security of the coastal state.

Answer: Innocent passage.

Q8. A country has an Exclusive Economic Zone (EEZ) extending up to 200 nautical miles from its baseline. What rights does the country have over the natural resources in this zone?

Answer: Within its **Exclusive Economic Zone (EEZ)**, the coastal country has sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources. These include **living resources** such as fish and **non-living resources** such as minerals, oil and natural gas, as well as certain energy resources. Other states retain certain rights and freedoms recognised under international law.

Key point: EEZ = up to 200 nautical miles + special rights over natural resources.

Q9. Create a model of an ocean with ship routes, protected zones, and safety measures. Based on the model, explain how it follows maritime laws and protects the ocean.

Answer: A model can show an **ocean area, ship routes, protected marine zones, coastal areas, ports, safety or warning zones, maritime boundaries and fishing areas.** Ship routes can be shown separately from protected areas, while navigation and safety measures can reduce risks to ships and people. Protected zones can represent areas where marine ecosystems receive greater protection. The model demonstrates how maritime rules can

balance **navigation, resource use, safety and protection of the marine environment**. It also shows why responsible shipping and pollution prevention are important for protecting oceans.

Quick Revision: Ocean relief → Waves, tides and currents → Marine resources → Cyclones and tsunamis → Early warning systems → Maritime zones → International maritime rules → Sustainable ocean use.

Based on the textbook exercise page provided for Chapter 1: Oceans and Life.