

Subject: Geography Revision Worksheet — *Oceans, Marine Ecosystems & Coastal Environments*

Part A: Objective Questions

Section 1: Multiple Choice Questions (MCQs)

Circle the correct option:

1. Which ocean depth zone receives enough sunlight for photosynthesis to take place?
 - a) Abyssal Zone
 - b) Sunlight (Sunlit / Epipelagic) Zone
 - c) Midnight Zone
 - d) Trench Zone
2. Which coastal landform is formed primarily by wave **deposition** rather than wave erosion?
 - a) Sea Cave
 - b) Headland
 - c) Sand Spit
 - d) Wave-cut Platform
3. What term describes the process where coral polyps expel the symbiotic algae living in their tissues due to increased sea temperatures?
 - a) Ocean Acidification
 - b) Eutrophication
 - c) Coral Bleaching
 - d) Salinization
4. The mouth of a river where freshwater mixes with saltwater from the sea is called a(n):
 - a) Estuary
 - b) Trench
 - c) Fjord
 - d) Coral Atoll

Section 2: Fill in the Blanks

1. The continuous, directed movement of seawater generated by forces like wind, water density, and the Coriolis effect is called an ocean _____.
2. Microscopic marine plants that form the base of the ocean food web are known as _____.
3. The wearing away and removal of coastal rock by wave action is known as coastal _____.
4. The excessive runoff of agricultural fertilizers into coastal waters causes rapid

growth of algae, leading to oxygen depletion—a process known as _____.

5. Coastal ecosystems consisting of salt-tolerant trees located in tropical regions that protect shorelines from erosion are called _____ forests.

Section 3: True or False

1. Harder, more resistant rocks on a coastline erode slowly, often forming steep cliffs and headlands. _____
2. Ocean acidification is caused by decreased levels of dissolved carbon dioxide in seawater. _____
3. Constructive waves build up beaches by carrying and depositing sediment. _____
4. The abyssal zone supports large populations of photosynthetic marine plants. _____

Part B: Subjective Questions

Scenario-Based Analysis Question

Scenario:

Seaside Cove is a popular coastal tourist town surrounded by soft sandstone cliffs and a thriving estuary ecosystem. Over the past decade, local authorities allowed the construction of new high-rise hotels directly along the cliff tops to boost tourism. To accommodate growing visitor numbers, untreated wastewater is discharged into the nearby estuary, and heavy recreational powerboats operate near the shore. Recently, residents noticed severe cliff slumping near the hotel foundations, frequent fish kills in the estuary, and reduced beach width during high tides.

1. **Environmental Analysis:** Identify **two** distinct human activities in Seaside Cove that are negatively impacting the local coastal environment, and state the specific consequence of each.
2. **Physical Geography Link:** Explain why building heavy infrastructure (like hotels) on soft sandstone cliffs accelerates coastal instability and erosion.
3. **Management Solution:** Propose **one soft engineering strategy** and **one management policy** local authorities can implement to protect both the coastline and the marine environment of Seaside Cove.