

# Foundations of Oceanography

Oceanography · Practice Test · 18 Questions

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**1. Which layer of the ocean is defined as the transition zone where temperature decreases rapidly with increasing depth?**

- A) Mixed layer
- B) Thermocline
- C) Halocline
- D) Abyssal zone

**2. What is the primary force responsible for generating the majority of surface ocean currents?**

- A) Coriolis effect
- B) Tidal forces
- C) Wind
- D) Density gradients

**3. Which chemical compound is the most abundant dissolved salt in seawater?**

- A) Magnesium sulfate
- B) Calcium carbonate
- C) Potassium chloride
- D) Sodium chloride

**4. What is the average salinity of the world's oceans in parts per thousand (ppt)?**

- A) 35
- B) 25
- C) 45
- D) 15

**5. The 'Great Ocean Conveyor Belt' is formally known as what type of circulation?**

- A) Surface wind circulation
- B) Thermohaline circulation
- C) Tidal resonance
- D) Eddy diffusion

**6. Which geological feature is formed at a divergent plate boundary where new oceanic crust is created?**

- A) Deep-sea trench
- B) Mid-ocean ridge
- C) Continental shelf
- D) Volcanic island arc

**7. What is the name of the phenomenon where cold, nutrient-rich water rises from the depths to the surface?**

- A) Downwelling
- B) Upwelling
- C) Convergence
- D) Turbidity

**8. Which zone of the ocean, also known as the twilight zone, receives faint sunlight but not enough for photosynthesis?**

- A) Euphotic zone
- B) Disphotic zone
- C) Aphotic zone
- D) Bathyal zone

**9. What is the primary cause of ocean tides on Earth?**

- A) Atmospheric pressure variations
- B) Gravitational pull of the Moon and Sun
- C) Undersea volcanic activity
- D) Density differences in water

**10. Which of these is the deepest trench in the world's oceans?**

- A) Tonga Trench
- B) Philippine Trench
- C) Mariana Trench
- D) Kermadec Trench

**11. What defines the 'benthic zone' in an ocean ecosystem?**

- A) The pelagic water column
- B) The surface waves
- C) The ocean floor
- D) The intertidal spray zone

**12. Which element, essential for biological life, is most often the limiting nutrient in marine ecosystems?**

- A) Oxygen
- B) Nitrogen
- C) Sodium
- D) Chlorine

**13. What is the effect called where moving objects, such as ocean currents, are deflected to the right in the Northern Hemisphere?**

- A) Ekman spiral
- B) Coriolis effect
- C) Geostrophic flow
- D) Langmuir circulation

**14. How does increasing the pressure in the deep ocean affect the solubility of gases in seawater?**

- A) It decreases solubility
- B) It increases solubility
- C) It has no effect
- D) It converts gas to solid

**15. What is the term for the total mass of living organisms in a given area or volume?**

- A) Ecosystem
- B) Biomass
- C) Population density
- D) Trophic level

**16. Which type of sediment is formed by the precipitation of minerals directly from seawater?**

- A) Lithogenous
- B) Biogenous
- C) Hydrogenous
- D) Cosmogenous

**17. What is the average depth of the world's oceans?**

- A) Approximately 1,000 meters
- B) Approximately 3,700 meters
- C) Approximately 7,500 meters
- D) Approximately 10,000 meters

**18. Which process involves the movement of water molecules through a semi-permeable membrane, crucial for regulating marine organism salt balance?**

- A) Osmosis
- B) Diffusion
- C) Active transport
- D) Capillary action