

Oceanography: Marine Life and Ecosystems

Oceanography · Answer Key · 20 Questions

1. Which marine mammal is known to be the deepest diver, capable of reaching depths of over 2,000 meters?

- A) Sperm whale**
- B) Bottlenose dolphin
- C) Blue whale
- D) California sea lion

2. What is the primary substance that makes up the skeletal structures of reef-building corals?

- A) Calcium carbonate**
- B) Silica
- C) Magnesium sulfate
- D) Iron oxide

3. Which zone of the ocean is defined by the complete absence of sunlight?

- A) Aphotic zone**
- B) Photic zone
- C) Intertidal zone
- D) Pelagic zone

4. What phenomenon causes the upwelling of nutrient-rich cold water along coastlines?

- A) Ekman transport**
- B) Tidal resonance
- C) Coriolis effect
- D) Thermal expansion

5. Which type of phytoplankton is responsible for a large portion of the Earth's oxygen production through photosynthesis?

- A) Prochlorococcus**
- B) Dinoflagellates
- C) Coccolithophores
- D) Brown algae

6. What is the largest marine protected area in the world by surface area?

- A) Papahānaumokuākea Marine National Monument
- B) Great Barrier Reef Marine Park
- C) Ross Sea Region Marine Protected Area**
- D) Galápagos Marine Reserve

7. Which sea creature possesses three hearts and blue blood?

A) Octopus

B) Giant squid

C) Cuttlefish

D) Nautilus

8. What is the salinity of typical open ocean water?

A) 35 parts per thousand

B) 10 parts per thousand

C) 50 parts per thousand

D) 5 parts per thousand

9. Which ocean current is a major contributor to the relatively mild climate of Western Europe?

A) Gulf Stream

B) California Current

C) Labrador Current

D) Peru Current

10. What type of fish is uniquely known for its ability to live in both freshwater and saltwater environments throughout its life cycle?

A) Euryhaline fish

B) Stenohaline fish

C) Benthic fish

D) Pelagic fish

11. What is the name of the process by which atmospheric carbon dioxide is sequestered in the deep ocean?

A) Biological pump

B) Carbon sink reversal

C) Oceanic degassing

D) Thermal stratification

12. Which gas, released during the decay of organic matter on the seafloor, is associated with methane clathrates?

A) Methane

B) Nitrogen

C) Helium

D) Neon

13. What is the largest species of shark currently inhabiting the Earth's oceans?

- A) Whale shark**
- B) Great white shark
- C) Basking shark
- D) Hammerhead shark

14. Which organism is the primary producer at the base of the Antarctic marine food web?

- A) Antarctic krill
- B) Diatoms**
- C) Copepods
- D) Icefish

15. What term describes the sharp change in density with depth in the ocean?

- A) Pycnocline**
- B) Thermocline
- C) Halocline
- D) Bathycline

16. Which marine reptile spends its entire life cycle in the ocean and is known for traveling thousands of miles to nesting beaches?

- A) Leatherback sea turtle**
- B) Saltwater crocodile
- C) Marine iguana
- D) Sea snake

17. What is the primary cause of ocean acidification?

- A) Absorption of atmospheric CO₂**
- B) Volcanic activity
- C) Increased solar radiation
- D) Agricultural runoff

18. Which layer of the ocean contains the highest concentration of marine life?

- A) Epipelagic zone**
- B) Mesopelagic zone
- C) Bathypelagic zone
- D) Abyssopelagic zone

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

A) 3,700 meters

B) 1,200 meters

C) 5,500 meters

D) 2,000 meters

20. Which organism exhibits bioluminescence to attract prey in the bathypelagic zone?

A) Anglerfish

B) Sea star

C) Sea urchin

D) Giant clam