

Marine Biology Essentials

Marine Biology · Answer Key · 15 Questions

1. Which marine zone, also known as the twilight zone, extends from 200 to 1,000 meters below the ocean surface?

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

2. What is the primary process by which corals obtain the majority of their energy through a symbiotic relationship with zooxanthellae?

- A) Chemosynthesis
- B) Filter feeding
- C) Photosynthesis**
- D) Osmosis

3. Which group of marine mammals belongs to the order Sirenia?

- A) Dolphins and porpoises
- B) Seals and sea lions
- C) Manatees and dugongs**
- D) Whales and orcas

4. What is the most abundant type of phytoplankton in the ocean, responsible for producing approximately 20% of Earth's oxygen?

- A) Prochlorococcus**
- B) Diatoms
- C) Dinoflagellates
- D) Coccolithophores

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

- A) Tidal current
- B) Thermohaline circulation**
- C) Gyre circulation
- D) Langmuir circulation

6. Which biological pigment is primarily responsible for the red coloration found in deep-sea crustaceans and fish?

- A) Chlorophyll
- B) Carotenoid**
- C) Hemoglobin
- D) Melanin

7. What is the name of the specialized cells in cephalopods that allow them to change color and texture for camouflage?

- A) Statocysts
- B) Chromatophores**
- C) Nematocysts
- D) Cnidocytes

8. Which substance, secreted by seagrasses and mangroves, helps to stabilize marine sediments and prevent coastal erosion?

- A) Mucilage
- B) Lignin
- C) Rhizomes**
- D) Pectin

9. The deepest point in the Earth's oceans, the Challenger Deep, is located within which trench?

- A) Tonga Trench
- B) Philippine Trench
- C) Mariana Trench**
- D) Kuril-Kamchatka Trench

10. Which of these sharks is considered an endothermic fish, capable of maintaining a body temperature higher than the surrounding water?

- A) Great White Shark**
- B) Whale Shark
- C) Nurse Shark
- D) Leopard Shark

11. What is the primary chemical composition of the shells of pteropods, which makes them highly vulnerable to ocean acidification?

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

12. Which type of marine organism utilizes bioluminescence primarily as a counter-illumination defense mechanism?

- A) Hatchetfish**
- B) Sea urchin
- C) Green turtle
- D) Giant kelp

13. What is the term for the process by which marine organisms accumulate higher concentrations of toxins at each successive trophic level?

- A) Bioaccumulation
- B) Biomagnification**
- C) Bioremediation
- D) Biodiversity

14. Which species of whale is known for performing the longest migrations of any mammal, traveling between feeding and breeding grounds?

- A) Blue Whale
- B) Humpback Whale**
- C) Sperm Whale
- D) Beluga Whale

15. In marine ecology, what are the organisms that live on the bottom of the ocean floor collectively called?

- A) Pelagic
- B) Benthic**
- C) Planktonic
- D) Nektonic