

Oceanography and Human Health

Oceanography · Practice Test · 12 Questions

1. Which marine-derived compound is used in the treatment of chronic pain as a potent analgesic derived from the venom of the cone snail?

- A) Ziconotide
- B) Tetrodotoxin
- C) Saxitoxin
- D) Domoic acid

2. The primary dietary source of iodine, an essential element for human thyroid hormone production, is often found in which marine organisms?

- A) Coral polyps
- B) Seaweed
- C) Zooplankton
- D) Jellyfish

3. What condition can occur when humans consume shellfish contaminated with the neurotoxin produced by *Pseudo-nitzschia* diatoms?

- A) Amnesic Shellfish Poisoning
- B) Paralytic Shellfish Poisoning
- C) Ciguatera Fish Poisoning
- D) Diarrhetic Shellfish Poisoning

4. Omega-3 fatty acids, which are critical for cardiovascular health in humans, are initially synthesized by which marine life form?

- A) Sharks
- B) Phytoplankton
- C) Crustaceans
- D) Cephalopods

5. Which mineral found in high concentrations in seawater is essential for maintaining human fluid balance and nerve impulse transmission?

- A) Calcium
- B) Potassium
- C) Sodium
- D) Magnesium

6. Marine sponges have been studied extensively for their ability to produce which type of compounds useful in human medicine?

- A) Antiviral and anticancer
- B) Cardiogenic
- C) Analgesic
- D) Sedative

7. The human body requires selenium, a trace element often bioaccumulated in marine fish, to support the function of which system?

- A) Digestive
- B) Immune
- C) Muscular
- D) Skeletal

8. Exposure to high levels of aerosolized toxins produced during Harmful Algal Blooms (HABs) can trigger which human health issue?

- A) Respiratory irritation
- B) Bone density loss
- C) Hyperthyroidism
- D) Visual impairment

9. Which marine-derived polysaccharide is widely used in medical research for creating hydrogels and scaffolds for human tissue engineering?

- A) Chitin
- B) Alginate
- C) Keratin
- D) Collagen

10. Ciguatera poisoning in humans is caused by the ingestion of reef fish that have accumulated toxins from which organism?

- A) Dinoflagellates
- B) Cyanobacteria
- C) Diatoms
- D) Coccolithophores

11. What is the human health risk associated with the bioaccumulation of methylmercury in large predatory marine fish?

- A) Neurological damage
- B) Skin pigmentation
- C) Bone brittleness
- D) Respiratory failure

12. The study of marine natural products has led to the development of Cytarabine, a drug used to treat human leukemia, originally derived from what?

- A) Sea sponges
- B) Blue-green algae
- C) Sea stars
- D) Deep-sea bacteria