

Aquaculture: A Deep Dive

Aquaculture · Practice Test · 21 Questions

1. Which of these aquatic animals is commonly farmed using extensive aquaculture methods, relying on natural food sources and minimal intervention?

- A) Atlantic Salmon
- B) Tilapia
- C) Oysters
- D) Shrimp

2. What environmental benefit is often associated with seaweed aquaculture?

- A) It significantly increases ocean acidity.
- B) It helps to absorb excess carbon dioxide and nutrients.
- C) It directly competes with coral reefs for sunlight.
- D) It produces methane emissions at a high rate.

3. Which method of aquaculture involves cultivating organisms in enclosures within natural bodies of water, such as bays or lagoons?

- A) Pond culture
- B) Raceway culture
- C) Cage culture
- D) Recirculating aquaculture systems (RAS)

4. What is a primary environmental concern related to intensive finfish aquaculture in open water?

- A) Over-enrichment of water with dissolved oxygen.
- B) Depletion of wild fish stocks due to feed requirements.
- C) Increased biodiversity due to introduced species.
- D) Significant reduction in nutrient runoff.

5. Which of these bivalve mollusks is a significant species in global aquaculture due to its ability to filter large volumes of water?

- A) Scallops
- B) Mussels
- C) Clams
- D) All of the above

6. The practice of aquaculture where organisms are grown on land in tanks or ponds is known as:

- A) Mariculture
- B) Aquaponics
- C) Inland aquaculture
- D) Offshore aquaculture

7. What is a potential ecological benefit of restoring degraded coastal wetlands through the cultivation of certain aquatic species?

- A) Increased water salinity.
- B) Enhanced habitat for native wildlife and improved water quality.
- C) Reduced coastal erosion.
- D) Promotion of invasive species establishment.

8. Which common aquaculture species requires a complex life cycle involving both freshwater and saltwater phases, making its farming challenging?

- A) Catfish
- B) Trout
- C) Shrimp
- D) Barramundi

9. What is the primary purpose of using artificial reefs in some offshore aquaculture operations?

- A) To increase water pollution.
- B) To attract predators to the farmed species.
- C) To provide settlement substrate for farmed organisms and support biodiversity.
- D) To decrease the natural food supply for wild fish.

10. Which of these aquaculture systems aims to integrate fish farming with plant cultivation, where fish waste provides nutrients for plants?

- A) Recirculating aquaculture systems (RAS)
- B) Aquaponics
- C) Flow-through systems
- D) Submerged cage culture

11. What is a key advantage of using recirculating aquaculture systems (RAS) from an environmental perspective?

- A) High water consumption and discharge.
- B) Minimal water usage and reduced waste discharge.
- C) Increased susceptibility to external pollutants.
- D) Lower energy efficiency compared to traditional methods.

12. Which species, farmed extensively in Asia, is known for its ability to tolerate a wide range of salinity and temperature conditions?

- A) Rainbow Trout
- B) Tilapia
- C) Atlantic Cod
- D) Pacific Oysters

13. What is a common feed source used in aquaculture that can contribute to the depletion of wild fisheries if not managed sustainably?

- A) Algae
- B) Plant-based proteins
- C) Fishmeal and fish oil
- D) Insect larvae

14. The cultivation of marine organisms in saltwater environments is specifically termed:

- A) Freshwater aquaculture
- B) Land-based aquaculture
- C) Mariculture
- D) Brackish water aquaculture

15. What environmental impact can result from the use of antibiotics in intensive aquaculture if not properly managed?

- A) Increased biodiversity in surrounding waters.
- B) Development of antibiotic-resistant bacteria.
- C) Reduced nutrient loading in the environment.
- D) Improved water clarity.

16. Which type of organism, when farmed, can act as 'ecosystem engineers' by improving water quality through filter feeding?

- A) Finfish
- B) Crustaceans
- C) Bivalve mollusks
- D) Seaweed

17. What is a significant challenge in farming freshwater species like catfish in ponds regarding water management?

- A) Maintaining low levels of dissolved oxygen.
- B) Preventing water evaporation and managing water exchange.
- C) Reducing water salinity.
- D) Increasing water temperature.

18. Which of these farmed species has a carnivorous diet, meaning its feed often requires other animal protein sources?

- A) Oysters
- B) Mussels
- C) Tilapia
- D) Atlantic Salmon

19. What is a key consideration when siting an aquaculture farm to minimize its impact on the local marine ecosystem?

- A) Proximity to shipping lanes.
- B) Strong currents that can disperse waste effectively.
- C) Absence of sensitive habitats like seagrass beds and coral reefs.
- D) High levels of natural predation.

20. The process of cultivating aquatic organisms in water that is a mixture of fresh and saltwater is known as:

- A) Marine aquaculture
- B) Freshwater aquaculture
- C) Brackish water aquaculture
- D) Land-based aquaculture

21. What natural phenomenon can pose a significant risk to coastal aquaculture operations, such as shrimp farms?

- A) Prolonged periods of intense cold.
- B) The arrival of freshwater floods.
- C) Sudden changes in salinity and water levels due to storms and tides.
- D) Excessive sunlight.