

Principles of Aquaculture

Aquaculture · Answer Key · 15 Questions

1. What is the primary purpose of a recirculating aquaculture system (RAS)?

- A) To increase water temperature manually
- B) To recycle and clean water through mechanical and biological filtration**
- C) To allow fish to migrate between freshwater and saltwater
- D) To eliminate the need for fish feed

2. Which term refers to the cultivation of aquatic plants like seaweed and kelp?

- A) Algaculture**
- B) Pisciculture
- C) Mariculture
- D) Crustacean farming

3. What is the role of a biofilter in an aquaculture system?

- A) To add oxygen to the water
- B) To convert toxic ammonia into less harmful nitrates**
- C) To heat the water to optimal temperatures
- D) To filter out large solid waste particles

4. Which aquatic species is most commonly farmed in 'cage culture' systems in open water?

- A) Oysters
- B) Atlantic Salmon**
- C) Freshwater Prawns
- D) Tilapia

5. What is the primary goal of integrated multi-trophic aquaculture (IMTA)?

- A) To farm only one species to maximize yield
- B) To use waste products from one species as food for another**
- C) To increase the use of synthetic fertilizers
- D) To farm only freshwater species in saltwater

6. What is 'fecundity' in the context of aquaculture?

- A) The survival rate of juvenile fish
- B) The total weight of the harvest
- C) The potential reproductive capacity of an organism**
- D) The nutritional content of fish feed

7. Which parameter is typically measured to determine the amount of oxygen available for fish respiration?

- A) pH level
- B) Dissolved oxygen**
- C) Salinity
- D) Turbidity

8. In aquaculture, what does FCR stand for?

- A) Fish Conversion Ratio
- B) Feed Conversion Ratio**
- C) Farm Capacity Rating
- D) Freshwater Control Regulation

9. What is the main environmental risk associated with the escape of farmed fish into natural ecosystems?

- A) Increased oxygen levels
- B) Genetic competition with wild populations**
- C) Reduction in ocean salinity
- D) Decrease in natural water temperature

10. Which aquaculture method involves farming organisms in land-based ponds?

- A) Cage culture
- B) Longline culture
- C) Pond culture**
- D) Offshore ranching

11. Why is a high stocking density in aquaculture potentially problematic?

- A) It reduces the amount of light in the water
- B) It increases the risk of disease transmission**
- C) It causes the water to become too basic
- D) It makes the fish grow too slowly

12. What is the main purpose of adding aeration to an aquaculture pond?

- A) To regulate the pH level
- B) To increase the concentration of dissolved oxygen**
- C) To kill harmful parasites
- D) To speed up the growth of algae

13. Which of these is considered an omnivorous fish species often used in aquaculture?

- A) Shark
- B) Tilapia**
- C) Swordfish
- D) Barracuda

14. What is the primary function of a sedimentation tank in an aquaculture facility?

- A) To sterilize water with UV light
- B) To remove suspended solid waste via gravity**
- C) To increase water flow velocity
- D) To monitor fish growth rates

15. Which of the following is a key advantage of farming bivalve mollusks like oysters and mussels?

- A) They do not require external feed as they are filter feeders**
- B) They can only grow in freshwater
- C) They are the fastest growing fish species
- D) They do not require water to survive