

Aquaculture Fundamentals

Science · Answer Key · 12 Questions

1. Which term describes the process of farming aquatic organisms such as fish, crustaceans, and mollusks?

- A) Hydroponics
- B) Aquaculture**
- C) Pisciculture
- D) Mariculture

2. What is the primary purpose of an 'aquaponics' system?

- A) To farm algae for biofuel
- B) To raise fish and grow plants together in a symbiotic environment**
- C) To desalinate ocean water for irrigation
- D) To clean plastic waste from coral reefs

3. In aquaculture, what is meant by the term 'feed conversion ratio' (FCR)?

- A) The weight of feed given compared to the weight gained by the animal**
- B) The speed at which fish consume their food
- C) The amount of protein in fish feed
- D) The frequency of feeding times per day

4. Which of the following is a common environmental concern associated with open-net pen aquaculture?

- A) Increased ocean depth
- B) The spread of parasites or disease to wild fish populations**
- C) Reduction of water salinity
- D) Decreased oxygen levels in the atmosphere

5. Which shellfish is commonly grown on ropes or trestles in Australian coastal waters?

- A) Blue mussels**
- B) Giant clams
- C) Mud crabs
- D) Sea urchins

6. What is a 'recirculating aquaculture system' (RAS) designed to do?

- A) Release fish into the wild
- B) Filter and reuse water within the farm**
- C) Heat water using solar power
- D) Catch wild fish for human consumption

7. Which of these is a major input required to successfully farm carnivorous fish like salmon?

- A) Fishmeal and fish oil**
- B) Only vegetable scraps
- C) Saltwater only
- D) Artificial sunlight

8. What is the role of an aerator in an aquaculture pond?

- A) To remove fish waste from the bottom
- B) To increase the concentration of dissolved oxygen in the water**
- C) To lower the water temperature
- D) To act as a physical barrier against predators

9. Which of these aquatic organisms is an example of an 'extractive' species, often grown to improve water quality by filtering nutrients?

- A) Atlantic salmon
- B) Whiteleg shrimp
- C) Pacific oyster**
- D) Barramundi

10. What defines 'mariculture' within the broader field of aquaculture?

- A) Farming species in freshwater lakes
- B) Farming species exclusively in the deep sea
- C) Farming marine organisms in seawater environments**
- D) Farming organisms in laboratory settings only

11. In aquaculture, what does the term 'broodstock' refer to?

- A) Fish that are ready for market sale
- B) The adult fish used for breeding purposes**
- C) The juvenile fish transferred to grow-out tanks
- D) The plant life used to filter the water

12. Why is water quality monitoring essential in fish farming?

- A) To ensure the fish reach market size faster
- B) To prevent the build-up of toxic ammonia and nitrites**
- C) To make the fish meat taste like vegetables
- D) To keep the water clear for photography