ICAR AIEEA PG 2025 Fisheries Science Question Paper With Solutions

Time Allowed :120 Minutes	**Maximum Marks :**480	**Total questions :**120

General Instructions

Read the following general instructions carefully and adhere to them strictly:

1. **Duration of the Exam:** The total duration of the examination is 2 hours and 30 minutes.
2. **Total Marks:** The question paper carries a total of 480 marks.
3. **Number of Questions:** The paper contains 120 multiple-choice questions (MCQs)
4. **Question Paper Format:**
   - All questions are compulsory unless otherwise instructed.
   - Each question has four options, out of which only one is correct.
5. **Mode of Examination:** The examination is conducted in online mode (Computer-Based Test).
6. **Marking Scheme:**
   - Each correct answer carries 4 marks.
   - 1 mark will be deducted for each incorrect answer.
   - No marks will be awarded or deducted for unattempted questions.
7. **Medium of Paper:** The question paper will be bilingual (English and Hindi), except for the language section (if applicable).
8. **Electronic Devices:** Use of calculators, mobile phones, smartwatches or any electronic gadgets is strictly prohibited.

1. Which is the fastest-growing freshwater fish species cultured in India?

(A) Catla catla

(B) Labeo rohita

(C) Pangasius hypophthalmus

(D) Clarias batrachus

Correct Answer: (C) Pangasius hypophthalmus

Solution:

Step 1: Pangasius hypophthalmus (Striped catfish) is native to the Mekong basin but widely cultured in India.

Step 2: It has very high growth rates, reaching marketable size within 6–8 months.

Step 3: Catla and Rohu are Indian major carps with moderate growth. Clarias is air-breathing catfish but less farmed now.

Quick Tip

Pangasius = fast growth = popular in freshwater cage and pond culture.

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2. Which hormone is commonly used for induced breeding of Indian major carps?

(A) Insulin

(B) Gonadotropin-releasing hormone analogues (GnRH)

(C) Thyroxine

(D) Melatonin

Correct Answer: (B) Gonadotropin-releasing hormone analogues (GnRH)

Solution:

Step 1: Induced breeding is done to obtain seed outside natural season.

Step 2: Synthetic GnRH analogues like Ovaprim or Ovatide are commonly used as they stimulate pituitary gonadotropins to induce spawning.

Step 3: Insulin and thyroxine have no role. Melatonin influences seasonal cycles but not directly used for induction.

Quick Tip

IMC breeding → GnRH analogues like Ovaprim.

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3. Which device is used to measure dissolved oxygen in pond water?

(A) Hydrometer

(B) Secchi disc

(C) DO meter

(D) Thermometer

Correct Answer: (C) DO meter

Solution:

Step 1: Dissolved oxygen (DO) is crucial for fish survival.

Step 2: DO meter gives instant, accurate DO levels.

Step 3: Hydrometer checks salinity, Secchi disc for turbidity, thermometer for temperature.

Quick Tip

DO meter → direct DO reading → vital for pond management.

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4. Which vitamin deficiency causes Lordosis in fish fry?

(A) Vitamin A

(B) Vitamin C

(C) Vitamin E

(D) Vitamin D

Correct Answer: (B) Vitamin C

Solution:

Step 1: Vitamin C is essential for collagen synthesis and bone development.

Step 2: Deficiency leads to skeletal deformities like Lordosis (spinal curvature) and scoliosis in fish fry.

Step 3: Vitamin A relates to vision, D to bone mineralization but not curvature in fry, E to fertility and antioxidants.

Quick Tip

Lordosis = check Vitamin C in feed.

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5. Which is the most common bacterial disease in freshwater aquaculture?

(A) Columnaris

(B) Argulosis

(C) Ichthyophthiriasis

(D) Dactylogyrosis

Correct Answer: (A) Columnaris

Solution:

Step 1: Columnaris is caused by Flavobacterium columnare.

Step 2: It affects gills, fins, skin — causes lesions, ulcers.

Step 3: Argulosis is parasitic (Argulus), Ichthyophthiriasis = white spot (protozoan), Dactylogyrus is monogenean parasite.

Quick Tip

Columnaris $\rightarrow$ bacterial $\rightarrow$ common in warm water fish.

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6. Which of these is an exotic carp introduced in India?

(A) Catla catla

(B) Labeo rohita

(C) Hypophthalmichthys molitrix

(D) Labeo calbasu

Correct Answer: (C) Hypophthalmichthys molitrix

Solution:

Step 1: Hypophthalmichthys molitrix = Silver carp, an exotic Chinese carp.

Step 2: Introduced for mixed carp culture with Indian Major Carps.

Step 3: Catla, Rohu, Calbasu = Indian Major/Minor Carps.

Quick Tip

Silver Carp = Hypophthalmichthys molitrix $\rightarrow$ exotic filter feeder.

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7. Who is known as the Father of Fisheries Science in India?

(A) Dr. Hiralal Chaudhuri

(B) Dr. K. H. Alikunhi

(C) Dr. K. Radha Krishnan

(D) Dr. S. Jones

Correct Answer: (A) Dr. Hiralal Chaudhuri

Solution:

Step 1: Dr. Hiralal Chaudhuri pioneered induced breeding of carps in India.

Step 2: His work revolutionized carp seed production.

Step 3: He is rightly called the Father of Indian Fisheries Science.

Quick Tip

Induced breeding = Hiralal Chaudhuri = Father of Indian Fisheries.

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8. Which preservative is commonly used in fish curing?

(A) Citric acid

(B) Sodium benzoate

(C) Common salt

(D) Formaldehyde

Correct Answer: (C) Common salt

Solution:

Step 1: Curing = preservation by removing moisture and adding salt.

Step 2: Salt inhibits bacterial growth and prolongs shelf life.

Step 3: Citric acid, sodium benzoate have other uses but salt is primary for fish curing.

Quick Tip

Salt $\rightarrow$ ancient main preservative for fish.

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9. Which is the recommended protein level for carp grow-out feed?

(A) 15–20%

(B) 20–25%

(C) 30–35%

(D) 40–45%

Correct Answer: (B) 20–25%

Solution:

Step 1: Carp grow-out diets need moderate protein to ensure growth without excess cost.

Step 2: Recommended level is 20–25%.

Step 3: Higher protein (¿30%) is for carnivorous species or fry.

Quick Tip

Grow-out carp $\rightarrow$ 20–25% protein ideal.

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10. Which method is used to calculate fish population in a water body?

(A) Mark and Recapture

(B) Transect Sampling

(C) Quadrat Method

(D) Radiography

Correct Answer: (A) Mark and Recapture

Solution:

Step 1: Mark and Recapture is standard to estimate fish stock size.

Step 2: Fish are caught, marked, released, and recaptured to get a proportion.

Step 3: Transects quadrats for plants/benthic fauna. Radiography is unrelated.

Quick Tip

Population estimate $\rightarrow$ Mark-Recapture.
