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**AB-234215**

**M.Sc. (Semester-II) Examination, June-2025**

**( Regular/Backlog )**

**ZOOLOGY**

**( Fish Biology Aquaculture )**

*Time Allowed : Three Hours*

*Maximum Marks : 70*

**Note :** This question paper is divided into four sections. Attempt questions from all four sections as per given directions. Distribution of marks is given in each section.

**SECTION-A**

**( Objective Type Questions )**

**Note:** Attempt any ten questions. Each question carries 1 mark. [10x1=10]

1. (i) Physico Chemical characteristics for aquaculture includes following parameters :

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**[P.T.O.]**

- (a) pH
  - (b) Salinity
  - (c) Temperature
  - (d) All of the above
- (ii) Mariculture includes :
- (a) Oysters
  - (b) Mussels
  - (c) Sea weeds
  - (d) All of the above
- (iii) Wheel-animalcules belong to :
- (a) Insecta
  - (b) Rotifera
  - (c) Porifera
  - (d) Trematoda
- (iv) Indian major carps thrive well at temperatures between :

- (a) 20-37°C
  - (b) 35-40°C
  - (c) below 20°C
  - (d) above 40°C
- (v) Gangotri hatchery is situated at :
- (a) Gangotri
  - (b) Uttarkashi
  - (c) Uttar Pradesh
  - (d) Tamil Nadu
- (vi) Water flea is the common name for :
- (a) Daphnia
  - (b) Cyclops
  - (c) Gammarus
  - (d) Palaemon
- (vii) A disorder in which cavities of the body is accumulates fluids is called :

- (a) Costiasis
  - (b) Air-bladder disease
  - (c) Pop-eye
  - (d) Dropsy
- (viii) Which of the following is a bacterial disease?
- (a) Velvet disease
  - (b) Costiasis
  - (c) Fin rot
  - (d) Chilodow disease
- (ix) Gonadotropins are the products of :
- (a) Hypothalamus
  - (b) Gonads
  - (c) Pituitary
  - (d) Synthetic Analogues
- (x) The suitability of ovaprim has been proved for :

- (a) Indian major carps
- (b) Cat fishes
- (c) Mulletts
- (d) Murrels

- (xi) Example of bottom feeder fish is \_\_\_\_\_.
- (xii) Fish is dipped for 1-2 min in 500 ppm copper sulphate for treatment of \_\_\_\_\_.

#### SECTION-B

##### ( Very Short Answer Type Questions )

**Note :** Attempt **any five** questions. Each question carries **02** marks. (Word limit 25-30 words). [5x2=10]

2. (i) What is Dissolved Oxygen?
- (ii) What is Brakish Water Culture?
- (iii) What is Nursery Ponds?
- (iv) What is Pen Culture?
- (v) What are Transgenic Fishes?

- (vi) What is COD?
- (vii) Write the name of five aquarium fishes.

#### SECTION-C

##### ( Short Answer Type Questions )

**Note :** Attempt **any five** questions. Each question carries **04** marks. (Word limit : 250 words) [5x4=20]

3. (i) Cryopreservation of gametes
- (ii) Nutrition of aquatic animals
- (iii) Aquaculture engineering
- (iv) Role of probiotics in fish nutrition
- (v) Impact of GMOs on aquatic biodiversity
- (vi) Role of Cage Culture in fish production
- (vii) Integrated fish farming

#### SECTION-D

##### ( Essay Type Questions )

**Note :** Attempt **any three** questions . Each question carries **10** marks. (More than : 500 words) [3x10=30]

4. (i) Describe role of fish food organisms in fish culture.

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- (ii) What is the basis of induced breeding? Give historical background of hypophysation technique.
- (iii) What are the Water Quality parameters? Describe their importance in aquaculture.
- (iv) Describe the transport methods of eggs, fry finger lings and adults.
- (v) Describe the infection and diseases in fishes.

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