(6 pages) **Reg. No. :** .....

Code No. : 7193 **Sub. Code : PZOM 43**

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Fourth Semester

Zoology

AQUACULTURE

(For those who joined in July 2017 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. High turbidity of water can be caused by
   (a) Suspended solids
   (b) High temperature
   (c) Toxic substances
   (d) Exotic species

2. Diameter of sand particles are in the range of
   (a) 2.0-0.05 mm
   (b) 0.05-0.002 mm
   (c) <0.002 mm
   (d) >2.0 mm

3. Protein content of typical fish meal ranges between
   (a) 6-17% (b) 32-40%
   (c) 60-70% (d) 7-39%

4. Which among these is NOT oyster
   (a) *C. virginica* (b) *C. glomerata*
   (c) *C. albicans* (d) *C. rivularis*

5. Hypophysation refers to
   (a) Integrated health management
   (b) Disease prevention technique
   (c) Transmission of virus
   (d) Induced breeding

6. _____ is aquatic weed feeder
   (a) *Cirrhinus mrigala*
   (b) *Ctenopharyngodon idella*
   (c) *Labeo rohita*
   (d) *Cirrhinus jullieni*

7. Transgenic fish refers to

(a) Sterile fishes

(b) Sex reversal fishes

(c) Cryopreseved fishes

(d) Genetically engineered fish

8. High collagen fish byproduct produced from air bladders of carps, catfish, eels etc.

(a) Ensilage (b) Isinglass

(c) Chitosan (d) Gelatin

9. BKD of salmonids is caused by

(a) *Aeromonas salmonicida*

(b) *Aeromonas liquefacens*

(c) *Aeromonas hydrophila*

(d) *Renibacterium salmoninarum*

10. Which of the following is the major cause of biomagnification?

(a) Eutrophication

(b) Detergent pollution

(c) Pesticide pollution

(d) Industrial pollution

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Give an account on inland fishery resources of India.

Or

(b) Explain general ecological characteristics of reservoirs in India.

12. (a) Describe the life cycle of freshwater prawn *Macrobrachium rosenbergii* with suitable illustration.

Or

(b) Describe the raft culture system used for Oyster propagation.

13. (a) Give an account on various craft used for fish recruitment.

Or

(b) Explain the practices for mono and poly culture with suitable examples.

14. (a) Describe the steps involved in pond preparation for shrimp farming.

Or

(b) Give an account on spoilage of fishes and methods of fish preservation.

15. (a) Comment on biochemical and nutritional profiles of finfish and add its significance.

Or

(b) Explain various control measures used to avoid aquatic pollution in fish farm.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about appropriate abiotic and biotic factors for sustainable fish culture.

Or

(b) Explain the ecological characteristics of rivers suitable for aquaculture.

17. (a) Describe the process involved in production of cultured pearl and add a note on factors involved in enhancing the quality of pearl.

Or

(b) Give a detailed account on energy requirements of fishes and add notes on live feeds.

18. (a) Explain in detail about induced breeding in fishes and its advantages in modern aquaculture.

Or

(b) Elaborate harvesting and post-harvesting technologies in aquaculture.

19. (a) Give an account on farm construction and its management in inland fisheries.

Or

(b) Comment elaborately on fishery by-products and their utility.

20. (a) Give an account on etiology, clinical symptoms and prophylaxis of bacterial diseases in fishes.

Or

(b) Discuss in detail about the marketing strategies involved in aquaculture.

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