

**Zoology (P.G.)**

**[CBCS]**

**M.Sc. Third Semester End Examination-2024**

**(Regular & Supplementary Paper)**

**PAPER-ZOO-303**

**[Fishery Special]**

**Full Marks: 40**

**Time: 02 Hrs.**

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in their own words as*

*far as practicable*

*Illustrate the answers wherever necessary*

**(Use separate answer script for each group)**

**Group A**

**Marks 20**

**[Ichthyotaxonomy & Biology]**

**1. Answer any two questions of the following: 2x2= 4**

- a. Write the characteristics of fish.
- b. Name two non convention fish feed.
- c. Write sequentially the developmental stages of fish.
- d. Differentiate between anadromus and caladromus fish migration.

**2. Answer any two questions of the following: 2x4= 8**

- a. What do you mean by Gonado-somatic index? State its significance in the study of fish reproduction.

(2)

- b. Explain the importance of artificial feed in fish culture.
- c. Write the characteristic feature of order cypriformes with two examples.
- d. Make a qualitative analysis of a fish and add comments on the same.

3. Answer any one question of the following: 1x8=8

- a. i) Define hormone. Classify hormones on the basis of their chemical nature.  
ii) Write the mechanism of thermo regulation in fishes.
- b. What do you mean by 'least cost' or 'best buy' technique calculate the cost of 100kg fish feed of supplying particular ingredient when cotton seed meal (54% protein) cost US\$0.4013kg<sup>-1</sup> and groundnut meal (44%protein) costs US\$0.3021kg<sup>-1</sup> mixed in equal proportion?

**Group B**

**Marks 20**

**(Limnology and Oceanography)**

4. Answer any two questions of the following: 2x2= 4

- a. Define estuary. Give an example from Indian east coast.
- b. What do you mean by Maritime states? Give example from India.

(3)

- c. What do you mean by lacustrine fishery? Explain briefly.
- d. Explain Lotic and Lentic system with example.

5. Answer any two questions of the following: 2x4= 8

- a. Write the impact of riverine pollution in fisherman community.
- b. Write some strategies to increase fish production in Indian reservoirs.
- c. Define Continental shelf. Why are continental shelves regarded as the best grounds for fishing?
- d. Write about some adaptive mechanism of deep sea fish to survive in their environment

6. Answer any one question of the following: 1x8=8

- a. Differentiate between remote Sensing and GIS. Write application of remote Sensing and GIS in fishery. 3+5
- b. i) What is upwelling? Write its importance in fishery.  
ii) Discuss the thermal stratification of different types of lakes. 4+4

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