

4. (a) What are sensory systems? Explain the different types of sensory system in fishes and along with importance. (9)
- (b) Comments upon the parental care in fishes along with suitable examples. (6)
5. (a) Explain the different types of fins in fishes along with their important functions. (9)
- (b) Write a short note on Fish foods and feeding habits. (6)
6. (a) Give an account of the cardiovascular physiology of fishes, with special reference to the structure of the heart and the pathway of blood circulation. (9)
- (b) Briefly describe the general characteristics of fishes. (6)
7. Write the short notes on any **three** of the following : (5×3=15)
- (a) Induced Breeding
- (b) Acid Base Balance in fishes
- (c) Lateral line system in fishes
- (d) Scales in fishes

(1200)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 10396

K

Unique Paper Code : 2233010019

Name of the Paper : DSE – Ichthyology

Name of the Course : B.Sc. (Hons.) Zoology

Semester : VII (NEP - UGCF)

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions in all.
3. Question no. 1 is compulsory.
4. Draw neat and well-labelled diagrams wherever necessary.

1. (a) Define the following : (1×5=5)

(i) Vitreodentine

(ii) Fecundity

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(iii) Ampullary organs

(iv) Euryhaline Fishes

(v) Schooling in fishes

(b) Differentiate between any five of the following :
(2×5=10)

(i) Catadromous and Anadromous migration.

(ii) Placoid and Cycloid type of scales.

(iii) Aquatic and Aerial respiration in fishes.

(iv) Heterocercal and homocercal caudal fin.

(v) Bony and Cartilaginous fishes.

(vi) Extensive and Intensive culture of fish.

(c) Write scientific names of the following :
(1×5=5)

(i) Rohu

(ii) Stinging catfish

(iii) Indian snow trout

(iv) Silver carp

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(d) Expand the following abbreviation : (1×5=5)

(i) ICAR (ii) CIFT

(iii) FAO (iv) IMC

(v) DCFR

(e) Match the following Columns : (1×5=5)

(i) The caudal fins in *Latimeria* a. African lung fish

(ii) Swim bladder is absent in b. Molariform

(iii) The body of carps is covered with c. 3 lobed

(iv) *Protopterus* is commonly known as d. Cycloid scales

(v) Molar like crushing teeth e. Elasmobranchs

2. (a) Give detail account of the diversification and relationships of jawless and jawed fishes. (9)

(b) Explain the migration of fishes along with suitable examples. (6)

3. (a) Draw a well labelled diagram of Weberian ossicles in fishes along with important functions of different units of ossicles. (9)

(b) Give a brief note on nitrogen excretion and metabolism. (6)

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