

**211114**

**M. Sc. (Fourth Semester) Examination, June 2021**

**ZOOLOGY**

*Paper : Third (Opt.)*

Ichthyology (fish) structure and functional

*Maximum Marks : 42*

*Note: Attempt questions of all **three** sections as directed. Distribution of marks is given with sections.*

**Section-‘A’**

**(Objective Type Questions)**

**7×1=7**

*Note : Attempt all questions. Each questions carries 1 mark.*

**1.** Choose the correct answer :

- (i) The Total numbers of order's in L. S. Berg's classification is :
  - (a) 602
  - (b) 604
  - (c) 606
  - (d) 608
- (ii) The Swim Bladder of Telcosts develops as a diverticulum from the wall of the :
  - (a) Ovary
  - (b) Liver
  - (c) Gut
  - (d) Kidney
- (iii) Which of the following Bony fishes posses Ampulla of Lorenzini?
  - (a) Channa marulius
  - (b) Catla Catla
  - (c) Barbus Sarana
  - (d) Plotossus anguillaris
- (iv) Which of the following is a Hill Stream fish?

- (a) Garra
  - (b) Clarias
  - (c) Channa
  - (d) Amebiasis
- (v) The Poison Gland of Scorpion Fish is situated on :
- (a) On the Tail
  - (b) On the Opercular Spine
  - (c) On the Dorisal fin Spine
  - (d) On the Pictoral fin Spine
- (vi) Which of the following is the Extinct Class of Fishes?
- (a) Peterichthyes
  - (b) Acanthodi
  - (c) Cocostei
  - (d) All of the above
- (vii) Tripus is the Bone of :
- (a) Vertebrate Column
  - (b) Pectoral Girdle
  - (c) Weberian Ossicles
  - (d) Upper Jaw

**Section-‘B’**

**(Short Answer Type Questions)**

**5×2=10**

*Note : Attempt all questions. Each questions carries 2 marks.*

2. Draw only well labelled diagram of V. S. of skin of a fish which belongs to class Elasmobranchii.

**Or**

Draw only well labelled diagram of V. S. of Skin of a fish. Which belongs to class Teleostomii?

3. Draw only a well labelled diagram of Alimentary canal of Claries batrachus.

**Or**

Draw only a well labelled diagram of Alimentary Canal of Scoliodon.

4. Write short note on the types of kidney found in mains Teleosts.

**Or**

Draw only a well labelled diagrams of the membranous labyrinth of a cartilagenous fishes.

5. Write short note on the Patterns of Migration.

**Or**

Write short note on the Sound Producing Organs.

6. Write short note on the Fecundity.

**Or**

Draw only a well labelled diagram of nearly hatched larva.

**Section-‘C’**

**(Long Answer Type Questions)**

**5×5=25**

*Note : Attempt all questions. Each questions carries 5 marks.*

7. Define the Loomation. Describe the different types of fins used in locomation.

**Or**

Write an essay on the origin and evolution of fishes.

8. Write an essay on the air bladder and their function.

**Or**

Describ the strucutre, mechanism of working, functions of Weberian Ossicles and their connections with the membranous labyrinths.

9. Write an essay on the Coloration in fishes.

**Or**

Write an essay on the Luminous organs found in fishes.

10. What is adaptation? Describe the different types of adaptations found in Hill stream fishes with suitable diagram and examples.

**Or**

What is adoptation? Describe the different types of adaptations found in deep sea fishes with suitable diagram and examples.

11. Write an essay on the Poisonous and Venomous fishes.

**Or**

Write an essay on the parental care in fishes.