

**2017**

**M.Sc.**

**1st Semester Examination**

**FISHERIES SCIENCE**

**PAPER—FSC-102**

**Subject Code—28**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

**Unit—I**

**(Taxonomy and Classification of Fishes)**

**1. Answer any two questions from the following : 2×2**

(a) Define microtaxonomy and macrotaxonomy.

(b) State the important properties of zoological nomenclature.

*(Turn Over)*

- (c) Define cladogram. State its importance in fish evolution.
- (d) Mention the important characteristics of Mollusca. Give examples of two molluscas having aquaculture importance.

2. Answer any *two* questions from the following : 2×4

- (a) Discuss different taxonomic characters which are used in the classification of fishes.
- (b) Give an idea about cytotaxonomical approach for fish identification.
- (c) Discuss the importance of taxonomy in Aquaculture.
- (d) State about dichotomous key with proper explanation.

3. Answer any *one* question from the following : 1×8

- (a) (i) Mention the important differences between class Elasmobranchi and Teleostomi.
- (ii) Give the order name and order characters of the following fishes :

|                    |                        |
|--------------------|------------------------|
| Mystus mystus ;    | Scoliodon sorrakowah ; |
| Lates calcarifer ; | Tenuialosa ilisha.     |

- (iii) Add a note on the importance of order Cypriniformes fish in Indian environment. 2+4+2
- (b) (i) Define Binomial and Binominal nomenclature.
- (ii) Discuss 'Law of priority' in Zoological nomenclature with proper examples.
- (iii) What is holotype ? Write the significance of holotype.
- (iv) Write a note on System Nature. 2+2+2+2

### Unit—II

#### ***(Biomechanics, Distribution and Evolution of Fishes)***

4. Answer any *two* questions from the following : 2×2
- (a) What is biological clock ?
- (b) Point out distribution of any two lung fishes.
- (c) What are zoogeographical realms ?
- (d) Why devonian period is called on the 'Age of fishes' ?
5. Answer any *two* questions from the following : 2×4
- (a) Briefly narrate circadian rhythms with example.

- (b) Briefly describe the evolution of any one group of fish by using the phylogenic tree.
- (c) Give an account on the living fossil of fishes.
- (d) Briefly explain the notable features of chimera fish or ghost shark.

6. Answer any *one* question from the following : 1×8

- (a) What are agnatham fishes ? Give an account on the general features and importance of agnatham fishes. Add a note on evolutionary significance of Dipnoan fishes.

2+4+2

- (b) What is fish migration ? Briefly describe the type of fish migration with example. Add a note on significance of fish migration.

2+4+2

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