

2016

M.Sc.

1st Semester Examination

FISHERIES SCIENCE

PAPER—FSC-102

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.

Write the answers to questions of each unit in Separate Books.

Unit—I

(Taxonomy and Classification of Fishes)

1. Answer briefly any *two* questions of the following : 2×2
 - (a) Define holotype and paratype with proper example.

(Turn Over)

- (b) Mention the important characteristics of crustaceans. Give two examples of them having economic importance.
- (c) What do you mean by Linnaean hierarchy? Mention the typical seven taxa of this system.
- (d) State the importance of ICZN.
2. Answer any *two* questions of the following : 2×4
- (a) Enumerate the role of taxonomy in fisheries science.
- (b) Discuss about taxonomic key.
- (c) State about phylogenetic tree in respect of fish evolution.
- (d) Differentiate between elasmobranch and teleost fish.
3. Answer any *one* question of the following : 1×8
- (a) (i) Define 'α' and 'β' taxonomy.
- (ii) Write four important rules of Zoological nomenclature.
- (iii) State about molecular approaches of taxonomy in fish species identification. 2+4+2
- (b) (i) What do you mean by 'extinct' fish? Give two examples.

- (ii) State the important characteristics and examples of the following order of fish :

Rajiformes, Siluriformes, Mastacembeliformes, Signathiformes.

- (iii) Add a note on Dipnoan fishes. 2+4+2

Unit—II

(Biomechanics, Distribution and Evolution)

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

- (a) Mention the distribution of *Latimeria menadoensis*.
(b) Define lunar rhythm with example.
(c) What is Geological time scale ?
(d) Write short note on spawning migration.

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

- (a) Write a brief note on living fossil of fishes.
(b) State the component of swimming drag of fishes.
(c) Briefly explain the notable features of Marbled lung fish.
(d) Briefly discuss the evolution of fishes.

6. Answer any *one* of the following questions : 1×8

(a) What is agnathan fishes? Write the scientific name and general accounts of agnathan fishes. $2+6$

(b) What is Zoogeographical realms? Briefly elucidate the geographic range and fishes available in the oriental realms. $1+(3+2)+2$
