

2015

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) Mention important characteristics of Dipnoan fishes with examples.
 - (b) State important characteristics of Crustacea with examples.

(Turn Over)

- (c) Mention important characteristics of subclass Holocephali with examples.
- (d) What is the importance of taxonomic key?
2. Answer any *two* questions of the following : 2×4
- (a) Enumerate the role of taxonomy in aquaculture.
- (b) How would you prepare the phylogenetic tree?
- (c) Write a note on ICZN.
- (d) Discuss taxonomic bar-coding.
3. Answer any *one* question of the following : 1×8
- (a) (i) Define taxonomy & biosystematics.
 (ii) Discuss molecular approaches of taxonomy.
 (iii) Write four important rules of Zoological Nomenclature.
- $3+3+2$
- (b) (i) Mention the important characteristics of Elasmobranch fishes with examples.
 (ii) State the important characteristics and examples of the following orders :
 Perciformes, Clupeiformes, Siluriformes.
- $3\frac{1}{2} + 4\frac{1}{2}$

Unit—II

(Biology, Distribution and Evolution of Fishes)

4. Answer *two* from the following questions : 2×2
- (a) What is circadian rhythm? Give an example.
 - (b) Which period is called 'Age of Fishes'? Why?
 - (c) What is lunar rhythm? Cite an example.
 - (d) Write the names of Zoogeographical realms.
5. Answer *two* from the following questions : 2×4
- (a) Write a note on :
Lepidosiren sp. and *Neoceratodus* sp.
 - (b) Describe the upstream migration of Salmon.
 - (c) Write a note on living fossil of fishes.
 - (d) Briefly elucidate the evolution of bony fishes.
6. Answer any *one* of the following questions : 1×8
- (a) Briefly discuss the geographic range and fishes available on Oriental realms. Add a note on shoaling and schooling of fishes.

4+4

(b) Write note on :

3+3+2

- (i) Swimming mechanism of fishes ;
 - (ii) Spawning migration & recruitment migration ;
 - (iii) Swimming drag.
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