2018

M.Sc. 1st Seme. 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.

Unit–I

Taxonomy and Classification of Fishes

[Marks : 20]

1. Answer any *two* questions :   2×2

   (a) Write down different external taxonomics which are used in the classification of fishes.

   (b) Define holotype and paratype with suitable examples.

(c) What is original Linnaean hierarchial steps ?

(d) What is Cladogram ? State its importance.

2. Answer any *two* questions : 2×4

(a) Discuss about International code of Zoological Nomenclature.

(b) State about different chemical approach for taxonomic identification.

(c) State about dichotomous key.

(d) Discuss about cataloguing of fish.

3. Answer any *one* question : 1×8

(a) (i) Mention the important properties of taxaname.

(ii) Write down the role of fish taxonomy in Biological Control.

(iii) Define 'Synonyms' and 'Homonyms' with suitable examples.

(iv) Write four important rules of Zoological nomenclature. $1\frac{1}{2}+1\frac{1}{2}+3+2$

(Continued)

(b) (i) Write characters of following fish order with example of each :

Anguilliformes, Clupeiformes, Synbranchiformes.

(ii) Give an idea about fossil fishes.

(iii) Mention the important characters of Crustacea. Give two such examples having aquaculture value in West Bengal. $4\frac{1}{2}+1\frac{1}{2}+(1+1)$

Unit–II

[Marks : 20]

4. Answer any *two* questions : 2×2

(a) Define bio-rhythm with example.

(b) Distinguish between anadromous and catadromous fish migration.

(c) What are the organ responsible for locomotion in fishes ?

(d) State the relationship among lung fish and rest of bony fish.

(Turn Over)

5. Answer any *two* questions : 2×4

    (a) Write a brief note on Queensland lung fish and Marbled lung fish.

    (b) Briefly explain the machanism of forward movement in fish.

    (c) Briefly narrate the agnathan fishes with example.

    (d) What are the purposes of fish migration ?

6. Answer any *one* question : 1×8

    (a) What is Zoogeographical realms ? Briefly describe the geographic range and fishes available in the Ethiopian realms. Add a note on Australian realms with special emphasis on fish availability. 2+(2+2)+2

    (b) Define buoyant forces. Where it acts ? Considering the density of water 1.05×10^3 kg/m^3, calculate the amount of air required to lift the fish off the floor of a water body.

                                                      (2+1)+5