

M.Sc. 1st Semester Examination, 2023

FISHERIES SCIENCE

PAPER – FSC-103

Full Marks : 50

Time : 2 hours

Answer all questions

The figures in the right hand margin indicate marks

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

UNIT— FSC-103.1

*(Anatomy and Physiology of Finfish
and Shell fish)*

1. Answer any *two* of the following : 2 × 2

(a) Point out the difference between gastric and agastric fishes.

(b) Name the accessory respiratory gland found in *Heteropneustes fossilis*.

(c) Write short note on green gland.

(d) Why fish heart is called venous heart ?
Explain.

2. Answer any *two* of the following : 4×2

(a) Give an account of the food absorption process in fish intestine.

(b) Briefly describe spermatogenesis in teleost fish.

(c) Write a note on the different types of blood cells and their function.

(d) Briefly describe the digestive system of any teleost fish with suitable diagram.

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

(a) Draw and describe the ultra structure of

a typical teleostean gill and explain the mechanism of gaseous exchange. 5 + 3

(b) Write short note on : 4 + 4

(i) Structure and function of hypophysis in fish

(ii) Osmoregulation in fish.

UNIT— FSC-103.2

(*Fisheries Technology and Harbour Engineering*)

4. Answer any *two* of the following : 2 × 2

(a) What is catch sensors? Where it is used?

(b) Differences between active and passive fishing with examples.

(c) What is Bycatch Reduction Device (BRD)?

(d) Write name of four popular indigenous fishing gears used in West Bengal.

5. Answer any *two* of the following : 4×2

(a) Briefly explain different factors influencing the design of fishing craft.

(b) Give a brief account on advanced communication system used in fishing vessel.

(c) Briefly discuss the design of fishing gears with flow chart.

(d) Write a note on gear selection and its impact on aquatic ecosystem.

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

(a) What is fishing harbor ? Briefly describe the preliminary investigation for construction of fishing harbor. Give an account on public health hygiene and waste disposal in the fishing harbor.

$$1\frac{1}{2} + 2\frac{1}{2} + 4$$

(b) Write a short note on :

4 + 4

(i) Fishing gear building materials

(ii) Fishing Vessel Monitoring System.

