

2015

M.Sc.

1st Semester Examination

FISHERIES SCIENCE

PAPER—FSC-103

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

(Anatomy and Physiology of Fin Fishes)

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

(a) What is agastric fish? Give an example.

(Turn Over)

- (b) Write name of organs involved in fish blood formation.
- (c) What is Spiral valve of intestine ? State its functions in fishes.
- (d) Briefly explain the importance of accessory respiratory organ.

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

- (a) Describe gill structures of bony fishes with diagram.
- (b) Explain the accessory respiratory structure of *Anabás* sp. & *Clarias* sp.
- (c) Briefly explain the haematopoiesis.
- (d) State the factors influencing embryonic development of fishes.

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

- (a) Briefly explain the pituitary structure of teleost fishes. Add a note on thyroid gland of fishes with their importance. 4+4
- (b) Define fertilization and gastrulation. Briefly describe the organogenesis of fishes with diagram.

$$\left(1\frac{1}{2} + 1\frac{1}{2}\right) + 5$$

Unit—II*(Anatomy and Physiology of Shell fishes)*

4. Answer *two* questions from the following : 2×2
- (a) Briefly explain the mechanism of respiration in freshwater prawn with diagram.
 - (b) How many plates are present in the prawn stomach ?
 - (c) Define pleurobranch or side gills. Give an example.
 - (d) Point out the differences between blood of fin fishes and shell fishes.
5. Answer *two* questions from the following : 2×4
- (a) Briefly narrate the osmoregulatory behaviour of prawn.
 - (b) Describe the organogenesis process of any one shell fish.
 - (c) Briefly elucidate the structure of female reproductive system of freshwater prawn with diagram.
 - (d) Write briefly on the neural system of prawn.

6. Answer *one* question of the following : 1×8
- (a) Discuss the digestive system of any one shell fish with diagram. Add a note on hepatopancreas. 5+3
- (b) Briefly describe the excretory system of *Macrobrachium rosenbergii*. Add a note on their osmoregulation process.
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