

2017

M.Sc.

1st Semester Examination

FISHERIES SCIENCE

PAPER—FSC-103

Subject Code—28

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

(Anatomy and Physiology of fin fishes)

1. Answer any *two* questions from the following : 2×2
- (a) Why fish heart is called 'venous heart'? Justify.
- (b) Enlist the names of the hormones secreted from intestine of fishes.

(Turn Over)

(c) What are the differences between herbivorous and carnivorous fishes ?

(d) Briefly describe the oxyntic cell and its functions.

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

(a) Briefly describe the digestion process of protein and lipid in the intestine of fishes. 4

(b) Briefly narrate the factors influencing the development of fishes.

(c) Explain the formation of ovum or oogenesis of any one fish. 4

(d) Write a brief note on associated digestive glands and their functions in fishes.

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

(a) What is fertilization ? How many types of cell movements are found in the process of gastrulation of fish embryo ? Briefly explain the organogenesis process in any one finfish with diagram. 2+2+4

(b) Write short notes :

- (i) Pituitary gland of teleost fishes. 4
- (ii) Thyroid gland of any fish. 4

Unit—II

(Anatomy and Physiology of shell fishes)

4. Answer any *two* questions from the following : 2×2
- (a) What is antennasy or green gland ?
- (b) Briefly explain the mechanism of respiration of fresh water prandu.
- (c) Enlist the names of the asteries which are involved in the circulation system in *Macrobrachium rosenbergii*.
- (d) Compare the open and closed blood circulation system.
5. Answer any *two* questions from the following : 2×4
- (a) Briefly narrate the male reproductive system in penacid prandu and describe the special male reproductive structures.

- (b) Elucidate the embryonic development of freshwater mussel.
- (c) Give an account on the osmoregulatory mechanism in freshwater Prandu.
- (d) Briefly explain the circulatory system of cuttle fishes.

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

- (a) Define excretion. Briefly describe the anatomical details of excretory system of freshwater mussel. Add a note on hepatopancreas. 1½+4+2½
 - (b) What is digestion ? Briefly narrate the anatomical details of the digestive system of cuttle fish. Write a note on feeding mechanism. 1½+4+2½
-