

**2016**

**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? Cite an example.**

*(Turn Over)*

- (b) Enlist different component of fish blood.
- (c) What are associate digestive gland of fishes ?
- (d) Mention the name of different gonadal hormones of fishes.

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

- (a) Briefly describe the absorption process of food materials through the intestine of fishes.
- (b) Narrate the characteristics of fish blood vessels.
- (c) Briefly discuss the process of spermatogenesis of fishes.
- (d) Briefly explain the structure of gills of bony fishes.

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

- (a) What is fertilization ? Briefly explain the organogenesis process of fin fishes with diagram.

2+6

(b) Write a note on :

- (i) Pituitary gland of elasmobranch and teleost.
- (ii) Interrenal tissue and corpuscles of Stannins.

4+4

**Unit—II**

*(Anatomy and Physiology of Shell fishes)*

4. Answer *two* questions from the following : 2×2
- (a) How many types of plate found in shell fish stomach ?
  - (b) Mention the components of prawn blood.
  - (c) Indicate the mechanism of respiration of freshwater prawn.
  - (d) What are the organs involved in respiration of *Macrobrachium rosenbergii* ?
5. Answer *two* questions from the following : 2×4
- (a) Elucidate the organogenesis process of any one shell fishes.
  - (b) Briefly explain the any one reproductive system of freshwater prawn.
  - (c) Discuss the circulatory system of cuttle fishes.
  - (d) Narrate the osmoregulatory mechanism of *Macrobrachium rosenbergii*.

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

(a) Briefly explain the digestive system of freshwater prawn with diagram. Add a note on hepatopancreas.

5+3

(b) Write a note on : 4+4

(i) Green gland.

(ii) Cleavage process of shell fishes.

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