2011

M.Sc.

1st Semester Examination

AQUACULTURE MANAGEMENT & TECHNOLOGY

PAPER—AMT-104

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.

(Physiology of fin fish & shell fish)

1. Answer *four* of the following questions :　　　2×4

   a) What are different components of stomodaeum in prawn ?

   b) Differentiate Gastric fish from Agastric fish.

   c) What is the mode of feeding in strainer fishes ?

   d) State the functions of spiral valve.

(Turn Over)

e) What is the significance of proximal centriole of sperm?

f) Define osmoconformation. Give an example.

g) Narrate the procedure for calculation of fertilization rate and hatching rate.

h) What is rate limiting enzyme?

2. Answer *four* of the following questions : 4×4

a) Briefly describe the discoidal Meroblastic cleaverage in Zebra fish.

b) Explain briefly the Haematopoiesis.

c) Discuss the digestion process of protein through Gastro-intestinal tract of fishes.

d) What are the functions of hepatopancreas?

e) State the endocrine control of osmoregulation in fishes.

f) Give an account on the structure of cardiac stomach in freshwater prawn.

g) Give an idea about the early development of prawn.

h) Briefly explain the accessory respiratory structure of *Anabas* sp. and *Clarias* sp.

3. Answer *two* of the following questions :   8×2

   a) What are the composition of fish blood ? Compare among Venous and Arterial blood vascular system of teleostean fishes.   3+5

   b) Distinguish between herbivorus fishes and Detritivorus fishes. State the functions of associate digestive gland in fishes.   3+5

   c) Describe the screening protocol for identifying mutations for zebra fish development. Briefly illustrate the mechanism of osmoregulation in fresh water prawn.   4+4

   d) What is Ketogenesis ? Briefly describe the process of ATP formation in freshwater fishes. Add a note on the endocrine gland of fishes.   2+4+2

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     (Turn Over)