2022

(February)

FISHERY SCIENCE

(Honours)

SIXTH PAPER (Paper–6A)

(Fish Physiology, Biochemistry and Applied Genetics)

Marks : 56

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer Question No. **1** which is compulsory and *any* **four** from the rest

1. Write short notes on any *three* of the following : 4×3=12

(a) Islets of Langerhans

(b) Osmoregulation in freshwater fish

(c) Gas exchange across fish gills

(d) Triploidy and tetraploidy in fish

(e) Fish haemoglobin

2. Mention the different steps of glycolytic pathway with chemical formulae, enzymes and coenzymes involved in each step. 11

3. What are enzymes? Write a note on different properties of enzymes. What do you understand by allosteric regulation of enzyme activity? 2+5+4=11

4. Explain the process of digestion of carbohydrates in fish. 11

5. Write a note on composition of fish blood. Discuss the functions of RBC and WBC. 5+6=11

6. Explain the mechanism of urine formation in fish kidney in general. 11

7. Discuss the gonadal systems found in fish. Mention the hormones secreted by fish gonads and their functions. 5+6=11

8. Write short notes on any *two* of the following : 5½×2=11

(a) Transgenic fish species

(b) Pituitary gland in fish

(c) Genetic drift

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