5/H–36 (vi) (Syllabus–2015)

2019

(October)

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) Blood composition in fish

(b) Classification of enzymes

(c) Cryopreservation of gametes

(d) Osmoregulation in marine fishes

(e) Functions of the hypothalamus

(Turn Over)

2. Describe the chemical constituents of fish. Discuss how lipid is metabolized. 7+4=11

3. Describe gas exchange across the gills and mention the various factors affecting it. 6+5=11

4. Describe the structure and function of the pituitary gland in fish. 11

5. Explain *in situ* and *ex situ* methods of conservation of fish genetic resources. 11

6. Discuss the concept of genetic engineering. 11

7. Differentiate the osmoregulatory mechanism between freshwater fishes and brackish water fishes. 6+5=11

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

   (a) Glycolysis

   (b) Thyroid gland

   (c) Mechanism of blood circulation.

★★★