2016

M.Sc.

3rd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-301

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

(*Fish Histology and Bio-Chemistry*)

1. Write short notes on any *two* of the following questions :

2×2

(a) Stratum spongiosum ;

(b) Glycosidic bonds ;

(c) Characteristics of peptide bond ;

(d) Indicate the histological characteristics of liver.

(Turn Over)

2. Answer any *two* of the following : 2×4

(a) Describe the histological structure and function of fish skin.

(b) Mention the type of reactions in the pathway of glycolysis.

(c) Write the name and chemical structure of two monosaccharides and two disaccharides.

(d) Discuss the factors that affect the hepato-somatic index value in fish.

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

(a) (i) Point out the difference between cellulose and glycogen and discuss the pattern of bonds between residues. 3+1

(ii) Briefly describe the histology of pituitary gland of fish and write their secretions. 2+2

(b) (i) Briefly discuss the Alpha-helix structure in protein. 4

(ii) Elaborate the steps of TCA cycle and mention the type of reactions .

(Continued)

Unit–II

(*Bioinformatics, Remote sensing and GIS*)

4. Answer any *two* of the follow questions :　　2×2

   (a) State your idea on Global positioning system.

   (b) Name the key software components of GIS.

   (c) Elucidate your concept about sensing mechanism .

   (d) Define swath of a satelite.

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

   (a) Describe in brief the functions of GIS.

   (b) How Remote Sensing is useful for identification of Chlorophyll ?

   (c) Briefly discuss the methods used to store data in GIS.

   (d) Discuss satellite assisted general Aids to fishing operations.

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

   (a) (i) Indicate how sea surface temperature influence fish Catch in sea.　　4

   　　(ii) State the efficiency of lidar and vessel Echo Sounder/SONAR in locating a fish schools ?

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(b) Write short note of the following :

(i) Potential fishing zone ;

(ii) NOAA- AVHRR ;

(iii) Genome and proteome ;

(iv) Procedure for Fisheries forecasting system in India.

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