2017

M.Sc.

1st Semester Examination

FISHERIES SCIENCE

PAPER—FSC-104

Subject Code—28

Full Marks : 40

Time : 2 Hours

The figures in the 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

(Biology, Biodiversity and Conservation)

1. Answer any *two* questions from the following : 2×2

(a) What do you mean by invasive Species ?

Give Example from fish.

(b) Mention the feeding havit of *Lates calcarifer.*

(c) What do you mean by ranching ? state its necessities.

(d) Define Biodiversity hotspot. Give the name of four biodiversity hotspot in India.

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

(a) Discuss the distribution pattern and feeding habits of *Wallago attu.*

(b) Enumerate the fisheries biodiversity in India.

(c) State the life cycle of *Penaeus monodon.*

(d) Discuss in detail the regulation of Exotic ornamental Fish species introduction in India.

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

(a) (i) Mention different threats to fish biodeversity in nature.

(ii) Discuss different *ex-situ* fish conservation mode.

(iii) Add a note on pollution indicator species. 2+4+2

(b) (i) Define 'extinct' and 'endangered' categories with examples from fish.

(ii) Discuss any one of the Biodiversity Indices with explanation.

(iii) Add a note on 'Red Data Book'. 2+4+2

Unit—II

(Oceanography, Remote Sensing and GIS)

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

(a) What do you mean by non-renewable energy. Give example from ocean.

(b) Define El Nino. State its significance.

(c) Mention different causes of salinity in ocean.

(d) What do you mean by Geostationary Satellite ? Give examples.

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

(a) Give an idea about upwelling in marine environment.

(b) Discuss different zonation of sea.

(c) Enumerate the relation of salinity and temperature in respect of depth.

(d) Discuss the use of 'LIDAR' and 'SONAR' for fish School identification.

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

(a) (i) State different causes of spring tide.

(ii) Write down the components and functions of GPS.

(iii) Discuss different parameters used for early forecasting of PFZ. 2+3+3

(b) (i) What do you mean by biological oceanography ?

(ii) Classify ocean planktons in different ways.

(iii) Enlist the major causes of ocean pollution.

(iv) Add a note on vertical migration of zooplankton in ocean. 2+2+2+2