

2018

M.Sc.

2nd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-203

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

(Aquatic Pollution and Ecotoxicology)

1. Write in brief any two questions of the following : 2×2
- (a) Define toxicokinetics.
 - (b) Write down the principle causes of eutrophication.
 - (c) What is Sewage and sludge ?
 - (d) State about biosecurity in aquaculture point.

(Turn Over)

2. Answer any *two* questions of the following : 2×4
- (a) State about bioaccumulation and its impact on environment.
 - (b) Write down the function of state pollution control Board regarding aquaculture.
 - (c) Write an account on EIA and its importance.
 - (d) Discuss the genobiotic metabolism of toxic components.
3. Answer any *one* question from the following : 1×8
- (a) (i) State the important criteria of heavy metals.
 - (ii) Why Methyl mercury is more toxic to aquatic organism.
 - (iii) Mention the criteria of a good chelating agent.
 - (iv) Add a note on sources of Cadmium in our environment. 2+2+2+2
 - (b) (i) Write down the aerobic and an aerobic treatment of waste water.
 - (ii) State the guide lines regarding use of waste water in aquaculture. 4+4

Unit—II

(Aquatic Microbiology and Public Health Fisheries)

4. Answer any *two* questions of the following : 2×2
- (a) What do you mean by extremophiles ? Cite an example.
 - (b) Classify bacteria on the basis of their shape.
 - (c) What is biofilm ? State its importance.
 - (d) Differentiate Gram + ve bacteria from Gram - ve bacteria.
5. Answer any *two* questions from the following : 2×4
- (a) State the temperature and pH impact on microbial growth.
 - (b) What are the instruments required in a microbiology laboratory ?
 - (c) Write down the Sulphur Cycle in aquatic ecosystem.
 - (d) Classify bacteria on the basis of their oxygen requirement.

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

(a) (i) Discuss the role of microbes in the nutrient regeneration.

(ii) Write down the Nitrogen cycle in aquatic environment.

4+4

(b) (i) What do you mean by probiotics and prebiotic ?

(ii) Discuss the role of probiotics in aquaculture. 3+5
