

**M.Sc. 1st Semester Examination, 2023**

**FISHERIES SCIENCE**

PAPER — FSC-104

*Full Marks : 50*

*Time : 2 hours*

Answer **all** questions

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

**UNIT— FSC-104.1**

*( Pollution, Ecotoxicology and Aquatic Microbiology)*

1. Answer any *two* questions of the following :

(a) Define EC50 and MATC.

2 × 2

- (b) What do you mean by minimal media and selective media for bacteria culture ?
- (c) State on Maximum Residual Limit of drugs.
- (d) Write down the sources and uses of Agar powder.

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

- (a) Discuss different sterilization technique used for inhibition of microbial growth.
- (b) Give an account on environmental genotoxicity.
- (c) Discuss the process of drug metabolism.
- (d) What do you mean by biogeochemical cycle ? Discuss the role of microbes in Nitrogen cycle. 1 + 3

3. Answer any *one* question of the following :
- (a) Discuss bio-magnification with example.  $8 \times 1$   
Write a note on chelation therapy.  $4 + 4$
- (b) Discuss any process of bacteria culture method in the laboratory. Give an account on the importance of microbes in aquaculture.  $4 + 4$

### UNIT— FSC-104.2

( *Oceanography, Remote sensing and GIS and Disaster Management* )

4. Answer any *two* questions from the following :
- (a) State the causes of salinity in the ocean.  $2 \times 2$
- (b) What are the application of GIS in fisheries sector ?
- (c) What is upwelling? Mention its importance.

(d) What do you mean by disaster ? Give one example which impact on aquaculture in West Bengal.

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

(a) Give an account on the ocean pollution and its prevention.

(b) Discuss the pre and post-disaster management of coastal aqua farm.

(c) Discuss different causes of ocean current. State the importance of ocean current.

(d) Discuss different ways of detecting and predicting disaster.

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

(a) Classify different types of oceanography. Discuss different zonation in ocean. How temperature changes with the ocean depth ? 2 + 4 + 2

- (b) Name two natural hazards and two man made hazards impact on aquaculture. How remote sensing technology helps in exploitation of capture fisheries. Name two Central Institute of India dealing with ocean research. 2 + 4 + 2

**[ Internal Assessment – 10 Marks ]**

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