

M.Sc. 2nd Semester Examination, 2023

FISHERIES SCIENCE

PAPER —FSC-201

Full Marks : 40

Time : 2 hours

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—1

(Aquatic Ecology and Ecosystem Management)

[Marks : 20]

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

- (a) Distinguish between grazing and detritus food chain.
- (b) State the significance of prey-predator relationship.

- (c) Compare among lotic and lentic ecosystem.
- (d) Why wetland ecosystem is regarded as 'Earth's Kidney' ?

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

- (a) Describe characteristics of estuarine ecosystem.
- (b) Briefly explain Zonation of marine environment with diagram.
- (c) Discuss biotic communities of abyssal benthic zones.
- (d) State the life cycle of any zooplankton with diagram.

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

- (a) What is coral reef ecosystem ? Enlist major inhabitants in coral reef ecosystem. Add a note on adaptive modifications of deep sea animals. 1 + 3 + 4

(b) Write notes on : 4 + 4

(i) Physical characteristics of marine water.

(ii) Ecological importance of indicator species.

UNIT - 2

(*Fish Processing Technology and Quality Assurance*)

[Marks : 20]

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

(a) What is shelf life of fish in ice ?

(b) Define super-cooling.

(c) Why fast freezing is advantageous than slow freezing ?

(d) State the differences between fresh fish and spoiled fish.

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

- (a) State the code of practice in a processed fishery product.
- (b) Describe IQF techniques used in fish processing plant.
- (c) Give a brief account on freezing process of any shell fish.
- (d) Discuss different spoilage indices used to measure degree of fish spoilage.

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

- (a) What is immersion freezing? Give a brief account of cryogenic freezing. Add a note on block ice and flake ice. 2 + 3 + 3
- (b) Write brief notes on : 4 + 4
 - (i) Quality control and quality assurance
 - (ii) Steps of HACCP study.