

2016

M.Sc.

3rd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-303

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

(Nutrition of Fishes)

1. Answer in brief any *two* of the following : 2×2
- (a) What do you mean by antioxidant ? Mention name of two antioxidants used in aquafeed formulation.
 - (b) Justify the use of Binding agents in the preparation & fish feed.

(Turn Over)

- (c) What do you mean by microencapsulated fish feed? Mention its advantages.
- (d) Mention four antimetabolites with their respective sources, used in fish feed ingredients.
2. Answer any *two* questions from the following : 2×4
- (a) Write a note on non-conventional fish feed ingredients used in aquafeed preparation.
- (b) What is a 'Demand Feeder'? Represent basic design of a 'Demand feeder' with a note on its advantages.
- (c) State the Importance of fat soluble vitamin in fish nutrition.
- (d) Discuss probiotic feed and its importance in shrimp farming.
3. Answer any *one* of the following questions : 1×8
- (a) (i) How to estimate the growth rate of fish?
- (ii) Discuss energy partitioning in fish.
- (iii) Add a note on factors that alter energy needs.

$$2+3\frac{1}{2}+2\frac{1}{2}$$

- (b) (i) Discuss Pearson's Square method for feed formulation with proper example.
- (ii) State different types of feed additives used in aquafeed.
- (iii) Add a note on feed storage.

$$3\frac{1}{2} + 2\frac{1}{2} + 2$$

Unit-II

(Fisheries Technology and Harbor Engineering)

4. Answer any *two* of the follow questions : 2×2
- (a) What are the advantages of FRP ?
- (b) Differentiate between synthetic and natural fibres.
- (c) Different between 'Tronoling' and 'Trolling'.
- (d) What is dug-out canoes ?
5. Answer any *two* of the following questions : 2×4
- (a) Brief explain different factors affecting fishing gear design.
- (b) Briefly narrate the different buoys used in marine fishing.

- (c) Briefly explain the cast net and Dughore and mention their uses.
- (d) State the characteristics of an ideal fishing vessel.
6. Answer any *one* question of the following : 1×8
- (a) What is fishing harbour? Describe the preliminary investigation, planning and execution for construction of fishing harbour. $1+3+(2+2)$
- (b) What is fishing gear? Briefly explain the care, maintenance and preservation of fishing gears. $2+2+2+2$

[Internal Assessment : 10 Marks]
