

**2015**

**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) Define Net Protein Utilization (NPU) ?

(b) What do you mean by essential amino acid ? Mention their name in respect to fish nutrition.

*(Turn Over)*

(c) What do you mean by feed additives? Enlist few of them.

(d) Enlist the name of enzyme involved in Glycolysis.

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

(a) Discuss “least cost–best buy” technique with example.

(b) Explain the vitamin requirement in fish nutrition.

(c) Enumerate the non-conventional fish feed ingredients used in aquafeed formulation.

(d) Discuss digestible energy & metabolizable energy.

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

(a) (i) Calculate the growth, FCR and PER and comment on your results, when—

Number of fish = 10

Average initial weight = 13g

Duration of Experiment = 60 days

Feed given to fish = @ 6% bwd<sup>-1</sup>

Protein percentage in formulated feed 30%

Total final weight of fish = 560g.

(ii) Add a note on hydro-stability of fish feed.

6+2

- (b) (i) Discuss antinutritional factor in fish feed ingredients.
- (ii) Enumerate different types of fish/shellfish feed.
- (iii) Add a note on micronutrients in fish feed formulation.

3+3+2

## Unit-II

### *(Fisheries Technology and Harbor Engineering)*

4. Answer any *two* of the follow questions : 2×2
- (a) Write scientific name of two popular wood used in construction of fishing boat.
- (b) Differentiate between active and passive fishing gear.
- (c) State the catching principle of purse seine.
- (d) Differentiate between Chakna jal and Ghat jal.
5. Answer any *two* of the following questions : 2×4
- (a) What is anchor? Briefly describe different anchors used in marine fishing. 1+3
- (b) Briefly explain different factors affecting fishing gear design. 4

- (c) Briefly narrate different types of synthetic fibres used in fishing industry. 4
- (d) Write a note on TED with their regulation. 4
6. Answer any *one* question of the following : 1×8
- (a) What is fishing craft ? Briefly state the characteristics of a fishing craft. Add a note on FRP canoes. 2+3+3
- (b) What is trandling ? Explain the guidelines of infrastructural facilities for construction of fishing harbor. Write a note on EIA of fishing harbor. 2+3+3

**[Internal Assessment : 10 Marks]**

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