

2025

M.Sc. 3rd Semester Examination
FISHERIES SCIENCE

Paper : FSC - 307

(Fish Nutrition and Bioenergetics)

Full Marks : 25

Time : One Hour

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any *two* questions : 2×2=4

- (a) What do you mean by 'gross energy'? Name a device to measure gross energy of fish feed.
- (b) What is a 'prebiotic'? Mention its importance as fish feed supplements.
- (c) Write the different factors influencing the digestibility in fish.
- (d) "Vitamin C : An Important Nutritional Factor in Fish Diets" — Why?

2. Answer any *two* questions : 4×2=8

- (a) Discuss the different feeding process followed in the IMC farming pond in India.

P.T.O.

(2)

- (b) Write note on different feed additives used in fish feed formulation.
- (c) What is a digestibility marker? Name one external digestibility marker. Distinguish between 'digestible energy' and 'metabolizable energy'. 1+1+2
- (d) Discuss the energy partitioning fish with diagram.
3. Answer any *one* question : 8×1=8
- (a) Discuss the feeding management practices for *Penaeus vannamei* culture in West Bengal. How to calculate the FCR and PER? 4+4
- (b) Make a list of non-convention fish feed ingredients used in fish feed formulation. Explain least-cost best-buy technique with an example. Add a note on feed preservative. 3+3+2

Internal Assessment : 5 marks
