

7. Write short notes on any **three** of the following :

- (a) Inland fisheries 5+5+5
- (b) Finfish hatcheries
- (c) Fishery by-products
- (d) Role of remote sensing in fisheries
- (e) Fish buoyancy

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : **228** **I**

Unique Paper Code : 2233012007

Name of the Paper : DSE-7 – Fish & Fisheries

Name of the Course : **B.Sc. (Hons.) Zoology / B.Sc. (Prog) Life Sciences (NEP-UGCF)**

Semester : IV

Time : 3 Hours **Maximum Marks : 90**

Instructions for Candidates :

- (a) Write your Roll No. on the top immediately on receipt of this question paper.
- (b) Attempt any **five** questions in all.
- (c) Question No. **1** is compulsory.
- (d) Draw neat and well-labelled diagrams wherever needed.

1. (a) Define the following : 5

- (i) Fish aquarium
- (ii) Fishing gear
- (iii) Hapa pond

- (iv) Polyculture
- (v) Brood fishes
- (b) Differentiate the following : 10
 - (i) Sarcopterygii and actinopterygii
 - (ii) Shoaling and schooling
 - (iii) Pen culture and cage culture
 - (iv) Marine fisheries and estuarine fisheries
 - (v) Anadromous and catadromous fishes
- (c) Match the following : 4
 - (i) Indian Major Carp (a) Anabas testudineus
 - (ii) Mosquitofish (b) Clarias batrachus
 - (iii) Climbing perch (c) Catla catla
 - (iv) Walking Catfish (d) Gambusia affinis
- (d) Give the scientific name and classification up to the class of the following : 8
 - (i) Goldfish
 - (ii) Rohu
 - (iii) Sawfish
 - (iv) Zebrafish
- (e) Fill in the blanks : 3
 - (i) Placoid scales are present in
 - (ii) The mouth of fish has four pairs of sensory tentacles.

- (iii) The major osmoregulatory organ in elasmobranchs is
- 2.** (a) Describe the main features of fishes and their classification up to class. 8
 - (b) What is a transgenic fish? Explain the steps used to produce it. 7
- 3.** (a) Describe the structure of fish gills and explain their role in respiration. 7
 - (b) Define the term migration. Discuss the mechanism of migration in fish. 8
- 4.** (a) Enumerate the causes of depletion of fishery resources. 8
 - (b) Give a brief account of fishery regulation in the marine sector. 7
- 5.** (a) What is aquaculture? Enumerate the factors that affect aquaculture. 7
 - (b) What is broodstock management? Explain its importance. 8
- 6.** (a) Give an account of the processing of harvested fish. 7
 - (b) What is composite fish culture? Explain it with suitable examples. 8