

Reg. No. : .....

Name : .....

**Ph.D. ENTRANCE EXAMINATION, NOVEMBER 2022**

**FACULTY OF SCIENCE**

**AQUATIC BIOLOGY AND FISHERIES**

Time : 3 Hours

Max. Marks : 100

**Instructions :**

- 1) Answer **any ten** questions each from Section **A** and **B**.
- 2) Each question carries **5** marks.
- 3) No additional Answer sheets will be provided.
- 4) Candidates should clearly indicate the section, Question number in the answer booklet.

**Section – A**

**Research Methodology**

- I. Answer **any ten** questions. All questions carry equal marks.
  1. Explain any two methods for the testing of the Hypothesis.
  2. What are the methods for the collection of a sample?
  3. Explain different experimental designs.
  4. What is plagiarism?
  5. The goodness of fit.
  6. The function of IPR.
  7. What is the impact factor, and how is it worked out? Explain h-index.

8. Ethics in research.
9. Difference between primary data and secondary data.
10. Explain the general structure of a research article.
11. Type of scientific writing.
12. Describe the different steps involved in the research process.
13. Describe various web resources for literature collection.
14. The process involved in patenting.
15. How could you design a sample survey?

**(10 × 5 = 50 Marks)**

### **Section – B**

#### **Aquatic Biology and Fisheries**

- II. Answer **any ten** questions. All questions carry equal marks.
1. Major threats to the freshwater system.
  2. Adaptation of organisms in stream and river.
  3. The concept of restoration ecology.
  4. Eutrophication and pollution of lakes.
  5. Intertidal ecology and environmental factor.
  6. Describe the mangrove ecosystem in India.
  7. Explain the gradient of marine biodiversity.
  8. Describe the coral reef origin and global reef distribution.
  9. Describe marine pollution with categories.

10. Describe the management of fishery resources.
11. Describe the respiration of fishes.
12. Explain the Osmoregulation and ion balance of freshwater fishes.
13. Describe the reproductive system and annual reproductive cycle of fishes.
14. Describe the different sense organs of fishes.
15. Cold water fishery of India.

**(10 × 5 = 50 Marks)**

---