

Course III: Laboratory Exercise (MSZO -608(L)) Practical Zoology**UNIT WISE CONTENTS (MSZO -608(L))**

Candidates must produce at the time of practical examination their preparations, collection and practical record books containing a complete record of the laboratory work done during the session. The practical work shall comprise:

Block II Laboratory Course: (Fish and Fisheries): (MSZO -608)**Unit 01: Fish Eco-biology**

- 1.1 Objectives
- 1.2 Introduction
- 1.3 Skeletons of Cyprinoid and Siluroid fish
- 1.4 Taxonomic studies of fresh water fishes
- 1.5 Observation of length, weight and Length-weight relationship.
- 1.6 Determination of age & growth.
- 1.7 References

Unit 02: UNIT 2 PERMANENT PREPARATION

- 2.1 Permanent preparation of scales, sensory, ampullae etc.
- 2.2 Morphometry & Histology of fish body and organs.
- 2.3 Microscopic study of fish parasite, pathogens, Fungi and pathogenic bacteria.
- 2.4 Study of pituitary gland & preparation of PGE.
- 2.5 Study of reproductive organs of fish.
- 2.6 Study of nervous & sensory organs of fish.
- 2.7 References

UNIT 03: FISH HABITAT ECOLOGY EXERCISE

- 3.1 Objectives
- 3.2 Introduction
- 3.3 Determination of CO₂
- 3.4 Determination of DO
- 3.5 Determination of PH
- 3.6 Determination of turbidity
- 3.7 Determination of total alkalinity
- 3.8 Determination of hardness
- 3.9 Study of pond ecosystem.
 - 3.9.1 Measurement of primary productivity
 - 3.9.2 Microscopic study of plankton.

UNIT 04: FISH PHYSIOLOGY AND BIOCHEMISTRY EXERCISES

- 4.1 Objectives
- 4.2 Introduction
- 4.3 Material and Methods for estimation/counting
 - 4.3.1 Protein
 - 4.3.2 Lipids

- 4.3.3 Hematological analysis of fish blood.
- 4.3.4 Hemoglobin in fish blood
- 4.3.5 WBC/ RBC/DLC in fish blood
- 4.4 References