

B. Sc. 4th SEMESTER
DISCIPLINE SPECIFIC ELECTIVE (CORE – III)

IFF416C: INDUSTRIAL FISH AND FISHERIES - AQUACULTURE AND POND MANAGEMENT

CREDITS: THEORY: 4, PRACTICAL: 2

SYLLABUS THEORY

Unit I: Basics of Aquaculture

- 1.1. Definition and History of Aquaculture
- 1.2. Scope and Importance of aquaculture
- 1.3. Extensive, semi-intensive and intensive aquaculture
 - 1.3.1. Mono and Polyculture
 - 1.3.2. Integrated Fish farming
- 1.4. Criteria for selection of fish

Unit II: Preparation of Culture Ponds

- 2.1. Site selection
- 2.2. Different types of fish ponds (nursery, rearing and stocking ponds)
- 2.3. Preparation of ponds
 - 2.3.1. Control of aquatic insects
 - 2.3.2. Control of predatory and weed fishes
 - 2.3.3. Control of Aquatic weeds
 - 2.3.4. Fertilization and liming of ponds

Unit III: Post-stocking management of ponds

- 3.1. Procurement of seed
- 3.2. Analysis of physico-chemical parameters of pond
- 3.3. Artificial feeding and its importance in aquaculture
- 3.4. Feed Formulation

Unit IV: Fish Health management

- 4.1. Viral Diseases
- 4.2. Bacterial Diseases
- 4.3. Protozoan Diseases
- 4.4. Fungal diseases and Miscellaneous Diseases

PRACTICAL

(2 CREDITS)

1. Analysis of following parameters of water sample
 - a. Dissolved oxygen
 - b. pH
 - c. Carbondioxide
 - d. Alkalinity
 - e. Hardness
2. Preparation of culture ponds
3. Morphological study of important cultivable fishes
4. Collection and identification of
 - a. Aquatic weeds
 - b. Aquatic insects
 - c. Local Fishes
5. Culture of fish food organisms
6. Preparation of formulated feed for culture fishes
7. Identification and procurement of fish seed
8. Packing of fish seed for stocking.