#### V SEMESTER

# Course No.: 13 - Ornamental Fishery

credits:3

### **Course outcomes:**

CO1: Gain Knowledge on Aquarium Fishes

CO2: Have Knowledge on fresh water and marune water Ornamental Fishes

CO3:Have Practical knowledge on the setting up of aquarium

CO4: gain knowledge on water quality management for different types of aquariums

CO2: Apply the knowledge for self employment

#### **SYLLABUS**

### **UNIT I: Introduction**

- 1-1 Aquarium and ornamental fishes introduction
- 1-2 Present status of Aquarium trade in the world and India
- 1-3 Aquarium accessories aerators, filters, lighters and heaters
- 1-4 Water quality needs and different kinds of feeds

## **UNIT II: Fresh water ornamental fishes**

- 2-1 Live bearers, gold fish, koi, gourami, barbs abd tetras, angel fish and cichlid fish
- 2-2 Brood stock development, breeding, larval rearing and grow out
- 2-3 Larval feeds and feeding

#### **UNIT III: Marine ornamental fishes**

- 3-1 Varieties and habitat of marine ornamental fishes
- 3-2 major marine ornamental fish resources of India
- 3-3 Collection and transportation of live fish, use of anaesthetics
- 3-4 Breeding of marine ornamental fish
- 3-5 Other aquarium animals sea anemones, lobsters, worms, shrimps, octopus and starfish

## **UNIT IV: Aquarium management**

- 4-1 Setting up fresh water, marine and reef aquariums
- 4-2 Water quality management for different types of aquariums
- 4-3 Common diseases of aquarium fish, diagnosis and treatment
- 4-4 Temperature acclimatization and oxygen packing for aquarium fish

# UNIT V: Commercial production of aquarium fish and plants

- 5-1 Commercial production units of ornamental fish- requirements and design
- 5-2 Commercial production of goldfish, live bearers, gouramies, barbs, angels and tetras
- 5-3 Mass production of aquarium plants
- 5-4 Retail marketing and export of ornamental fish

### **V SEMESTER**

# **Course No.: 13 - Ornamental Fishery**

credits:1

## **PRACTICALS:**

- 1. Study of aerators types and structures
- 2. Water circulation methods in aquarium and filtration
- 3. Collection and identification of aquarium plants
- 4. Identification of common marine aquarium fishes
- 5. Identification of common fresh water aquarium fishes
- 6. Breeding of egg layers
- 7. Breeding of live bearers
- 8. Evaluation of significance of aquaria for commercial and domestic use.

## PRESCRIBED BOOK(S):

- 1. Dick Mills 1998. Aquarium fishes, Dorling Kindersly Ltd, London
- 2. Van Ramshort JD 1978. The complete aquarium encyclopedia, Elsevier

### **REFERENCES:**

- 1. Jameson JD and Santhanan R 1996. Manual of ornamental fishes and farming technologies, Fisheries College and research institute, Tuticorn
- 2. Stephen Spotte 1993. Marine aquarium keeping. John wiley and sons, USA