

**ST. JOSEPH'S COLLEGE FOR WOMEN (A), VISAKHAPATNAM**

**Four Year – B.Sc. (Hons), Semester – VIII**

**ZOOLOGY**

**SKILL ENHANCEMENT COURSE (AQUACULTURE)**

**ORNAMENTAL FISHERY**

**Code: Z 8505(3)**

**Time:4hrs/week**

**Max. Marks-100**

**Learning Objectives:** Enable the students to

- Gain knowledge about the basics of ornamental fishery.
- Apply proper management practices for water quality, disease prevention, and health management in ornamental fish farming
- Develop insight on the commercial production of ornamental fishes
- Acquire skill in setting up and management of an Aquarium.

**Learning Outcomes:**

By the successful completion of the course the student shall able to –

- Understand the basics of ornamental fishery and types of ornamental fishes.
- Summarize about marine & fresh water ornamental fishes' habitats, feeds and breeding units.
- Understand the principles of ornamental fish production techniques
- Apply proper management practices for water quality, disease prevention, and healthmanagement in ornamental fish farming
- Gain knowledge about the commercial production of aquarium fishes and plants.

## **II. 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 and 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 -

Sea goldy, Sea Horse, white tail dasylus, Yellow box fish

3-2 major marine ornamental fish

resources of India

3-3 Breeding of marine ornamental fish

3-4 Other aquarium animals – sea anemones, lobsters, eel, shrimps, octopus, starfish and turtle.

### **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 Collection and transportation of live fish, use of anaesthetics, 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 ornamental fishes

5-3 Mass culture of aquarium plants

5-4 Retail marketing, economics and export of ornamental fish.

### **III. REFERENCE BOOKS**

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
3. Dick Mills 1998. Aquarium fishes, Dorling Kindersly Ltd, London
4. Van Ramshort JD 1978. The complete aquarium encyclopaedia, Elseveir
5. Ornamental Fish Production and Management by A. K. Roy and N. K. Barman
6. Ornamental Fish Farming by F. C. Thomas and R. S. Liew
7. Ornamental Fish Culture and Aquarium Management by B. S. Bisht

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