

5th SEMESTER
VETERINARY TECHNOLOGY
(ORNAMENTAL FISHERIES)
SKILL ENHANCEMENT COURSE (SEC)

ORF520S ORNAMENTAL FISHERIES -II (WATER MANAGEMENT AND FEEDING)

CREDITS: THEORY: 2, PRACTICAL: 2
MAX MARKS: THEORY: 30, PRACTICAL: 30
MIN MARKS: THEORY: 12, PRACTICAL: 12

***Learning Objective:** To make the students aware of the vast potentials involved in ornamental fish farming and trading besides making them learn the diseases in fishes and other constraints in their culturing.*

***Learning outcomes:** After completing this course the learners will be able to learn the scientific method of setting an aquarium and to learn the culture breeding and marketing techniques of common indigenous ornamental fishes,*

THEORY

UNIT I: WATER QUALITY MANAGEMENT

Importance of water quality. Collection and preservation of water samples. Physicochemical parameters of water and their maintenance in aquaria and ornamental fish ponds.

UNIT H: FEEDING & NUTRITION

Principal nutrients and nutritional requirements of ornamental fishes. Methods of feed formulation and manufacturing. Live feeds. Forms of feeds. Feed additives.

Feed storage: use of preservatives and antioxidants-Feeding devices and methods. Nutritional deficiency diseases of ornamental fishes.

PRACTICALS (2 CREDITS)

Estimation of Ambient and water temperature, Estimation of Secchi Disc Transparency, Estimation of important water quality parameters (pH, electrical conductivity, chlorinity, total solids, dissolved oxygen, free carbon dioxide, total alkalinity, total hardness, Calcium, Magnesium, Nitrogen and phosphorus). Proximate composition analysis of feed ingredients and feeds. Preparation of artificial feeds using locally available feed ingredients.

BOOKS RECOMMENDED

1. A Practical Guide to Creating and Maintaining Water Quality By Peter Hiscock
2. Freshwater Aquarium Chemistry: A Comprehensive Guide for Tropical Fish Hobbyists By Kevin Ruff
3. Fish Nutrition in Aquaculture Sena By S De Silva & Trevor A Anderson
1. Manual of Nutrition
2. The Illustrated Encyclopedia of Aquarium Fish By Sandford Gina
3. 500 Freshwater Aquarium Fish: A Visual Reference to the Most Popular Species
4. Aquarium Fish: A Definitive Guide to Identifying and Keeping Freshwater and Marine Fishes By Bailey & Sandford
5. The Biology of Fishes By Harry M. Kyle
6. Breeding and Culture of Freshwater Ornamental Fish By Archana Sinha & P. K, Pandey
7. Fish Breeding By A. N. Shukla
8. An Introduction to Fishes By S. S. Khanna
9. Aquarium Fish Breeding By Jay Henday