

Semester-III

Course No. PSZOTE-308
CREDITS: 2

Title: Aquarium fish keeping
MAXIMUM MARKS: 50
Time Duration: 2Hrs
a) Minor Test I: 10
b) Minor Test II: 10
c) Major Test: 30

**Syllabus for the examination to be held in
December 2023, December 2024 and December 2025**

Students would develop an understanding with respect to:

CO1: set home, outdoor & public aquarium

CO2: manage the home as well as public (commercial) aquariums

CO3: learn to handle different aquarium tools accessories

CO4: determine appropriate species of fishes and plant life to be introduced into an aquarium and will identify common health problems with fish in an aquarium

Unit-I Construction, setting and maintenance of aquaria

(10hrs)

- 1.1 Fabrication: frame - glass, size, thickness etc.
- 1.2 Setting and selection of site
- 1.3 Stocking capacity
- 1.4 Aquarium accessories: Heaters, thermostat, aerators, water filters etc.
- 1.5 Aquarium decoratives
- 1.6 Regular maintenance schedule of aquarium

Unit-II Water quality and fish health management

(10hrs)

- 2.1 Abiotic components
 - 2.1.1 Dissolved oxygen
 - 2.1.2 pH
 - 2.1.3 Carbondioxide
 - 2.1.4 Ammonia
- 2.2 Biotic components
 - 2.2.1 Aquarium plants : Rooted, Branched, Floating
- 2.3 Aquarium fish diseases (symptoms and treatment)
 - 2.3.1 White spot
 - 2.3.2 Gill flukes
 - 2.3.3 Fin rot
 - 2.3.4 Mouth fungus

Unit-III Biology of ornamental fishes

(10hrs)

- 3.1 Biological notes on fresh water ornamental fishes.
 - 3.1.1 General characteristics
 - 3.1.2 Identification
 - 3.1.3 Feeding habits
 - 3.1.4 Breeding and spawning behavior
- 3.2 Biological notes on marine water ornamental fishes.
 - 3.2.1 General characteristics
 - 3.2.2 Identification
 - 3.2.3 Feeding habits
 - 3.2.4 Breeding and spawning behavior

Note for Paper Setting:

Examination/Theory	Syllabus to be covered in examination	Time allotted for Exam	% weightage (marks)
Minor Test I	upto 20%	1 hr	10
Minor Test II	21% to 40%	1 hr	10
Major Test	41% to 100%	2 hrs	30

- i. Major test will have two sections (A & B)
- ii. Section A is compulsory comprising of 10 questions of 1 mark each and be spread over entire syllabus
- iii. Section B comprises of 4 questions from remaining 2 units and candidate has to attempt one question from each unit of 10 marks each.

BOOKS RECOMMENDED:

1. Sanjib Saha, Concept of Aquarium Fish Keeping - 2/edition
2. A.D. Dholakia, Ornamental Fish Culture and Aquarium Management, Daya Publishing House
3. Marina Costantino, Your Freshwater Aquarium. Menakabooks Publishers
4. Mathur Sarvesh et al, Handbook of Freshwater Ornamental Fishes, Yash Publishing House

LIST OF PRACTICALS:

1. Comparative estimation of amount of FCO_2 in water samples
2. Comparative estimation of amount of DO in water samples
3. Comparative estimation of amount of NH_3 in water samples
4. Study various fish diseases
5. Study different ornamental fishes-both fresh and marine water
6. Study different aquarium plants
7. Identification of common Aquarium fishes
8. Study of slides of parasites and diseases

9. Setting up of an aquarium
10. Aquarium accessories (Heaters, thermostat, aerators, water filters)
11. Biological notes on fresh water ornamental fishes
12. Biological notes on marine water ornamental fishes