

Practical Plan				
Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa				
Name of Faculty: Ms.Aishwarya Nene, Mithali Halarnkar		Subject: Zoology		
Paper code: ZOO 143 (Aquarium Fish Keeping)		Program: F.Y.B.Sc		Division/Batch: 2
Academic year: 2024-25		Semester: II		Total Practicals/Labs: 60
Credits: 04				
Course Objectives: 1. Understand the basic principles of aquarium fish keeping, including water quality, filtration, and habitat requirements. 2. Outline the techniques of rearing /maintaining fishes in an aquarium. 3. Identify the requirements for an Aquarium fabrication. 4. Examine strategies for disease prevention, quarantine procedures, and treatment options for sick fish.				
Expected Course Outcome: At the end of the course, students will be able to: 1. Explain the biology of aquarium fishes, their nutritional requirements and care. 2. Identify the requirements for setting up and maintenance of an aquarium. 3. Evaluate aquarium fish diseases based on common symptoms. 4. Demonstrate construction of an aquarium set-up.				
Student Learning Outcome: After studying this course students will be able to know the different aquarium fishes and plants. They will know how to set up and maintain an aquarium and different types of aquarium fish feed.				
Month	Practicals/Labs Scheduled Date	No. of Practicals/Labs planned	List of Experiments	Reference books

December 2024	13 December 2024	4	Study (Origin, Habits, habitat, common characters and colour pattern, Feed and feeding behaviour, Sexual dimorphism and breeding behaviour) of common Aquarium fishes such as- Guppy, Molly, Sword tail, Gold fish, Angel fish, Anemone fish and Butterfly fish. (Specimens/ Pictures/ Photos)	Lab manual
	20 December 2024	0	-----	Lab manual
January 2025	3 January 2025	4	Study (Origin, Habits, habitat, common characters and colour pattern, Feed and feeding behaviour, Sexual dimorphism and breeding behaviour) of common Aquarium fishes such as- Guppy, Molly, Sword tail, Gold fish, Angel fish, Anemone fish and Butterfly fish. (Specimens/ Pictures/ Photos)	Lab manual
	10 January 2025	4	Types of Aquarium tanks: Stand alone, Cabinet aquarium, Aquarium stand, Wall aquarium, Floor aquarium and Public aquarium. (Pictures/ Photos).	Lab manual
	17 January 2025	4	Types of aquariums: Community aquarium, Planted aquarium, Fresh water aquarium, Marine water aquarium. (Pictures/ videos)	Lab manual
	24 January 2025	4	Study of aquarium accessories: Aquarium Lights, Water filters, Water areator, Aquarium thermometer and heater, Aquarium substrates, Aquarium decors, etc (Specimens/ Pictures).	Lab manual
	31 January 2025	4	Study of aquarium plants: Ceratophyllum, Java Moss, Vallisneria , Hydrilla sp. (Specimens/ Pictures/ Photos)	Lab manual
February 2025	7 February 2025	4	Identification of live feed organisms -Infusoria, Paramecium, Daphnia, Bloodworm , Black worm Tubifex and Artemia (Specimens/ Pictures/ Photos) and Culture of live feed organisms -Paramecium, Euglena and Infusoria any one.	Lab manual
	14 February 2025	4	Study of different types of formulated feed: Flakes, Crisps, Granules, Pellets, Discs and Vacation blocks. Frozen foods. (Specimens/ Pictures).	Lab manual

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	21 February 2025	4	Formulation of feed by using Pearson square method and preparation of formulated feeds.	Lab manual
	28 February 2025	4	Study of Fish diseases: Fin rot, Swim bladder disease, Fluke, Dropsy and Ich. (Specimens/ Pictures).	Lab manual
March 2025	7 March 2025	4	Setting up of an aquarium. Maintenance of Aquarium (Daily, Weekly and Monthly).	Lab manual
	14 March 2025	0	Aquarium water quality check up for pH, Ammonia, Nitrate, Nitrite by using test kit.	-----
	21 March 2025	4	Visit to Public aquarium/ Aquarium fish division ICAR complex Goa.	-----
	28 March 2025	4	Journal certification	-----
April 2025	4 April 2025	4	Journal certification	-----
	11 April 2025	4	Journal certification	-----