## MANNAM MEMORIAL NSS COLLEGE, KOTTIYAM STUDENT ENROLMENT LIST (2018-19)

Name of department : Department of Zoology

Name of course : Aquarium construction and Maintenance

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## DEPARTMENT OF ZOOLOGY MMNSS COLLEGE, KOTTIYAM ADD ON COURSE 2018-19 AQUARIUM CONSTRUCTION AND MAINTENANCE

**SYLLABUS** hours: 30

Total

## **OBJECTIVES OF THE COURSE:**

- This certificate course is intended to train the students in aquarium keeping starting with the very basic aspects of aquarium fabrication, their setting and maintenance.
- The course on Aquarium keeping is an attempt at acquainting the students with the inner workings of fabrication, installation and maintenance of home aquarium.
- There has been an increasing trend of keeping ornamental fish among the general public.

## Course Outcomes: At the end of the course, students will be able to:

- Economic aspects of aquarium keeping are also covered in this course.
- This skill is more self-employability oriented.
- The students would be able take up aquarium keeping as a source of income.
- Indulge students passion
- Develop skills to work in a commercial aquarium, zoo, or marine conservation.
- Create and manage feature aquariums in offices, shopping centres or other commercial locations.

## **SYLLABUS**

#### **MODULE 1: INTRODUCTION TO AQUARIUM** (5 hrs)

- 1.1 Definition of Aquarium, scope and history
- 1.2 Fabrication of home Aquarium
- 1.3 Design and construction of fresh water and marine Aquarium

## MODULE 2: ACCESSORIES OF AQUARIUM

(5 hrs)

2.1 Aerators and its types, different kinds of filters



2.2 Thermostats for Aquaria, hand net and other equipments

## **MODULE 3: AQUARIUM SETTING**

(10 hrs)

- 3.1 Site selection for Aquaria
- 3.2 Setting up of an Aquarium, gravels, pebbles, plants and ornamental objects
- 3.3 Setting up of fresh water and marine Aquarium and accessories

## **MODULE 4: AQUARIUM MAINTENANCE**

(10 hrs)

- 4.1 Water quality parameters incase of aquaria
- 4.2 Cleaning of aquarium
- 4.3 Nutritional requirements of well known aquarium fishes, different kinds of feed
- 4.4 Control of algae and snail

#### References

- 1. Guide to keeping and breeding the aquarium fishes (1968). Bombay aquarium Society, Mumbai.
- 2. Fresh water aquarium, Dawes, J.A., Roberts Royee Ltd. London
- 3. A Text Book of Pisciculture and Aquarium Keeping- DhananjayJadhav, Mohan Babre.
- 4. Hand Book of Fish aquarium- Hiware and Sonwane

Dr. SREEJA.V Course-Coordinator TO STATE OF THE PARTY OF THE PA

COURSE: AQ	UARIUM CONSTRUCTION COL	URSE	SCHEDULE
02/10/2018 (Tuesday) 03/10/2018 (Mednesday) 04/10/2018 (Mednesday) 05/10/2018 (Friday) 06/10/2018 (Saturday) 15/10/2018 (Monday) 16/10/2018 (Mednesday) 17/10/2018 (Mednesday) 18/10/2018 (Mednesday) 19/10/2018 (Friday) 20/10/2018 (Saturday) 05/11/2018 (Monday) 05/11/2018 (Mednesday) 05/11/2018 (Mednesday) 08/11/2018 (Mednesday) 09/11/2018 (Friday) 10/11/2018 (Monday) 10/11/2018 (Monday) 10/11/2018 (Monday) 10/11/2018 (Mednesday) 11/10/18 (Mednesday) 20/11/2018 (Mednesday) 20/11/2018 (Mednesday) 21/11/2018 (Mednesday)	3.30-4.30pm	Design Dellerent Dellerent Thesmo Rquip Site Setting Plants hesh Maxine Coater Coater Cle Nutoi	tion of Aquarium  and Scope  tion of Home elquarium  and Construction of Esshwators aquarium  lypes of Aevators  Kinds of filloss  Selection for equaria  and Omamental Objects  coates aquarium accessories  aquarium accessories  quality parameters— Chemical  aning of elquarium  troid Requirements  mt Kinds of feed  Course Evaluation
			Dy. SREEJA.V  Course - Coordinator

# MMNSS COLLEGE, KOTTIYAM DEPARTMENT OF ZOOLOGY END COURSE EVALUATION OF ADD ON COURSE 2018-19 AQUARIUM CONSTRUCTION AND MAINTENANCE

Max marks: 25

Time: 1 hr

**Section A.** Answer all questions in one or two sentences  $(5 \times 1 = 5)$ 

- 1. Give an example of invasive ornamental fish.
- 2. Give the scientific name of Angel fish.
- 3. What is an Aquarium?
- 4. How do you remove chlorine from water?
- 5. Write the name of an antibacterial agent used in fish transportation

Section B. Answer any 4 of the following

 $(4 \times 2 = 8)$ 

- 6. What is a living capsule of nutrition?
- 7. What is the purpose of using aerators in aquariums?
- 8. Analyze the potential of aquarium fishes as larval predators
- 9. How to control snail in aquarium?
- 10. Outline the process of Artemia culture.
- 11. Name one rooted and one floating plant used in aquarium.

Section C. Answer any 3 of the following

 $(3 \times 4 = 12)$ 

- 12. What do you mean by open and closed system of fish transport? Mention the principles and factors which are associated with fish transport. How do you transport broodfish?
- 13. Write about the preparation procedure of formulated fish feed. What is the composition of fish food that is used in aquariums?
- 14. How would you build a good aquarium? Which factors will affect the water quality of an aquarium?
- 15. Elucidate briefly the potential scope of the aquarium fish keeping industry as a cottage industry.
- 16. Describe the Water quality parameters in the case of aquaria.

# Mark sheet of end course evaluation of the Add on course Aquarium Construction & Maintenance(2018-19)

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Course Co-ordinator

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