

Dt: 21.08.2018

To
The Principal
Govt, Degree College
Koratla,

Sir,


Sub:- Grant of permission for conduction of certificate course – **Aquarium Management** by Dept.of.
Zoology-Reg

It was decided in the departmental meeting that a certificate course **Aquarium Management** has to be conducted for the interested students. It is a 30hrs course. Sstudents will need to put 75% attendance and score at least 75% in the MCQs test conducted at the end of the course to get a certificate. Course is free of cost.


Kindly permit us to conduct the course.

Thanking

Yours Sincerely


(G.NEERAJA)

HOD Dept. of Zoology

Permitted

PRINCIPAL
GOVT. DEGREE COLLEGE
KORATLA, DIST: JAGTIAL

Dt: 21-08-2018

Notice

This is to inform all the students that the Department of Zoology is organising a Certificate Course in "Aquarium Management". Those who are interested can enrol their names with the departmental in-charge on or before 23-08-2018. Classes will be conducted in Zoology Lab in this college from 27-08-2018

Rules and Regulations :

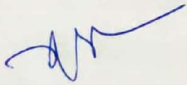
Eligibility: Student from any stream studying in Govt, Degree College, Koratla are eligible.

Duration: 30 days.- Working days

Timing: Classes will be conducted for one hour for 30 days after college working hours.

Course fee: Free of cost.

Course completion Certificate distribution: At the end of the course certificates will be distributed to student who attend 75 % of classes conducted and attain at least 75% marks in examination consisting of 20 Multiple choice questions.



Course In-Charge



Principal
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GOVERNMENT DEGREE COLLEGE, KORATLA DIST: JAGTIAL
(AFFILIATED TO SATAVAHANA UNIVERSITY, KARIMNAGAR)

Certificate Course in
“Aquarium Management”

Introduction:

An aquarium is basically the resemblance of an underwater ecosystem. In order to simulate the natural environment and habitat of the species, it is necessary to maintain constant water conditions as well as optimal water quality levels specifically required by each organism in the aquarium tank. To reach these conditions, it is essential to be familiar with the right type of equipment in order to supply the appropriate environmental conditions that each species requires. Care of system and equipment is a must for successful aquarium maintenance.

A freshwater aquarium is recommended for beginners as it is easier to maintain. Many people have a hobby of keeping an aquarium. But, due to lack of technical knowledge some problem creeps up and the system fails causing disappointment to hobbyists. Department of Zoology has taken initiative to encourage students to learn the basics in aquarium management for successful aquarium keeping

Objectives:

1. Select, establish and manage freshwater aquaria of varying sizes with different fish species animals.
2. Discuss the scope and nature of aquarium use and management.
3. Describe the Water Ecosystem.
4. Explain Water Quality and Management.
5. Determine appropriate equipment and systems for different applications in the provision of aquaria.
6. Determine appropriate fish species to be introduced into an aquarium.
7. Identify common health problems with fish in an aquarium.
8. Determine appropriate treatments in response to health issues.

Learning outcomes:

1. Identify fresh water fishes both indigenous and exotic.
2. Identify the equipment and protocols of aquarium keeping.
3. Set up and manage freshwater aquarium.
4. Ensure proper water quality management of fish in fresh water aquariums.
5. Ensure proper health management of fish in freshwater aquarium.
6. Maintain hygiene in freshwater aquariums.

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**Certificate Course in
AQUARIUM MANAGEMENT
Syllabus**

1) Scope and Nature of Aquaria:

Aquarium use and management, The categories of aquariums, Aquariums for fish communities, Aquaria Size and Complexity, Water quality control, Types of Equipment

2)The Water Ecosystem:

Interactions between organisms and the water environment, Checking abiotic factors, Different types of natural ecosystems

3)Water Quality and Management:

Tank capacity/Tank size, Maintaining a Balanced Nitrogen Cycle, Aquarium Cycling, Changing the Water, Vacuuming, Algae Removal, Avoiding Overfeeding, Water Conditions, Water Temperature, Water Hardness, Water pH, Salinity, Gas Exchange in the Aquarium, Preventative Care, Moving Your Aquarium Safely

4)Equipment and System Design:

Aquarium Equipment, Aquarium Tank, Filtration, Aeration, Light System, Aquarium Light Timer (optional), Tank Cover, Heaters and Thermometers, Gravel, Plants and Decorations, pH meters, Refractometers/Hydrometers, Water and Other Additives, Adding the Fish

5)Suitable Inhabitants for Aquarium:

Freshwater fish types, Freshwater Aquarium Plants

6)Fish Health and Diseases:

Fish Diet, Vitamin and Mineral Deficiency, Environmental Diseases, Diseases, Water Contamination and Poisoning, Ammonia and Nitrate Poisoning, Oxygen Starvation – Hypoxia, Pathogenic Disease Causes, Viral Diseases, Bacterial Diseases, Fungal Diseases, Genetic Diseases and Disorders, Parasites, Treatment of Diseases and Parasites, Quarantine Tank

7)Freshwater Tank establishment:

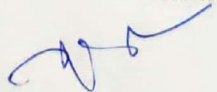
Tank Selection and Decorations, Electricity and Aquarium Set-up

Heater Installation, Filters and Air Pumps, Lighting and Hood, Solar Heating

Selection and Addition of Fish, Feeding Requirements, Cleaning and Maintenance

8) Maintenance:

Correct Tank Set-Up and Maintenance, Checking the Lighting, Checking the Temperature Filter Maintenance, Checking and Maintaining Water Quality, Fish Observation, Algal removal, Regular Water Changes, Preventative Care, Emergencies




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Certificate Course in "Aquarium Management"

STUDENTS ATTENDANCE

Ht.No 160770 4644-	Name of the Student	08	08	08	08	08	09	09	09	09	09	09	09	09	09	09	09	09	10	10	10	10	10	10	10	11	11	11				
		27	28	29	30	31	01	04	14	15	17	18	19	22	24	25	26	27	28	29	01	03	04	05	06	08	22	30	31	01	02	02
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
5009	Sajida Parveen	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	29
5010	Shafiya Nayeema	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	27
5012	Sumayya Firdous	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	29
5013	U.Prasanna	P	P	P	A	P	A	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
5005	D. Lokesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	28
5007	P.Suresh	P	P	P	A	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	26
5008	P.Haripriya	P	A	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	26
5508	M.Rajitha	P	P	P	A	A	P	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
5509	Neha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30
5502	B.Rekha	P	P	P	P	P	A	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
5505	G.Anuradha	P	P	P	P	P	P	P	P	A	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27
5507	K.Amukthamalyadha	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	26

Sign of In-Charge

Sign of Principal

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(AFFILIATED TO SATAVAHANA UNIVERSITY, KARIMNAGAR)


Certificate of Completion

is hereby granted to

B. Rekha BzC III yr

For successfully completing Certificate Course in
“Aquarium Management”

Conducted by Department Of Zoology from 27.08.2018 to 02.11.2018


Course Incharge


Principal

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