

ST. JOSEPH'S COLLEGE FOR WOMEN (A), VISAKHAPATNAM

Four Year – B.Sc. (Hons), Semester – VIII

ZOOLOGY

ENVIRONMENT BIOLOGY AND ENVIRONMENT PHYSIOLOGY

Practical

Time: 2hrs/week

Code:Z 8551(2)

Max. Marks-50

I. Learning objectives: Enable the students to

- Gain knowledge on the effect of toxicity in the fish.
- Adaptive modification in species.
- Conduct tests on water & soil analysis ideal for their growth.

Learning outcomes: Students should be able to

- Observe the opercular activity of a model fish
- Explain the adaptations in various animals.
- Comprehend the effects of toxicity tests.

Syllabus

1. Study of the effects of starvation / surfacing prevention on opercular activity in a teleost fish
2. Study of effect of fluoride toxicity on muscle protein in a fish.
3. Study of changes in chromatophores in fish kept against white and black backgrounds.
4. Toxicity test (LC 50)
5. Adaptive modification of feet or claws in birds.
6. Adaptive modification in mouth parts of insects.
7. Analysis of soil and water. (Fresh water-pond, river), Sea water – PH, Conductivity, NPK (Soil).
8. Study of biogeochemical cycles by way of models.

Visit to some natural habitats and man made habitats to study the human impact on environment.

Water analysis for fresh and waste water.

II. Lab web resources:

<https://sites.google.com/site/cynthiajdowns/teaching>
<https://www.scientistcindy.com/environmental-biology-laboratory.html>

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