

M. Sc. Environmental Sciences
Semester IV

Practical- 1

Duration :

5 Hrs

1. To determine the air pollution tolerance index (APTI) of selected plants species and comparison of plants for their relative susceptibility
2. Preparation of slides- zooplankton and phytoplankton's.
3. Determination of soluble protein in pollution and non polluted area.
4. Determination of carbohydrates inn polluted and non polluted area.
5. Measurement of Noise by Noise level meter.
6. Determent of chlorophyll from polluted and non polluted area.
7. Study of biomass distribution pattern in relation to branch size of tree using allometric relationship.

Practical- II

Duration : 5

Hrs

1. Test the difference between means of two samples using 't' test.
2. To determine the correlation between two variables.
3. Test of null hypothesis by computing SE of difference between two means.

4. To determine the association between two species by using chi- square test.
5. Introduction of biotechnological tools and techniques: principles and applications.
6. Isolation and culture of excised plant parts for micropropagation studies.
7. Isolation, purification and identification of aerobic bacteria from different soil and water sources.
8. Application of stage and ocular micrometer for measurements of microbes.
9. Preparation of different type's media for culture of bacteria, algae and plant tissues.
10. Isolation, purification and identification of mycorrhizal fungi.
11. Application of germs stain for indentation of bacteria.
12. Demonstration of biogas production by methanogen bacteria.
13. Study of the following:
 - a) Organisms as bio fertilizer- *Azolla*, *Anabena*, *Nostoc*, *Aulosira*, *Plectonema*.
Oscillaloria, *Tolypothrix*, *Glomus*, *Gigaspora*, *Sclerocystis*,
Rhizobium
 - b) Different stages of micropropagation -shoot multiplication, rooting, in vitro hardening