

**CLASS XI**

**SUBJECT: ENVIRONMENTAL SCIENCE (EVSC)**

**COURSE CODE: PRACTICAL**

**FULL MARKS: 30**

**CONTACT HOURS: 40**

Evaluation Scheme	Marks
One experiment from Group A	7
One experiment from Group B	7
Spotting ( Total three) from Group C. One from each set.	(3X2)=6
Practical Record Book +Viva Voce	(3+2)=5
One Investigatory field study from Group D + viva voce on field study	(3+2)=5

**A. List of experiments:**

1. Determination of total hardness of water sample provided by EDTA method.
2. Determination of total alkalinity of water sample provided by phenolphthalein/methyl orange.
3. Characterization of water samples: Turbidity, Color, Odor, Temperature, pH,
4. To test the presence of chloride, nitrates, carbonates and bicarbonates in the water sample provided.

**B. List of experiments:**

5. To measure the climate temperature by Six's maximum and minimum Thermometer :  
Correctly read the maximum and minimum temperature from Six's Thermometer and record them in a proper table.
6. To measure the humidity by hygrometer : Note down the dry bulb and wet bulb temperature reading in a proper table and find out the Relative Humidity of the atmosphere with the help of relative humidity chart.
7. To measure atmospheric pressure: Correctly read the atmospheric pressure from the

Fortin's Barometer with the help of Vernier scale and record them in a proper table.  
Calculate the atmospheric pressure.

8. To Study the effect of light on the growth of plants (Moong /Pea/ barley/ wheat) provided (Grown in two pots in light and dark conditions). Make the following observations using your experimental data and record in a tabular form as given below.

Number of seeds germinated in each pot, Color of seedling and leaves ,Height of seedlings, Length of internodes, Number of leaves produced per plant (seedlings)

### C. Study and observe the following (Spotting):

(Set-I): Identification of specimen (photograph/museum specimen) and comment on their importance: Sarpagangha, Yam, Sami, Cinchona, Neem

(Set-II): Identification of specimen (Photograph) and comment on their cause of endangeredness : Red panda, Snow leopard, Cheetah, Koala, one horned rhino , Ginkgo biloba.

(Set-III): Identification of specimen (photograph/museum specimen) and comment on their impact on biodiversity of India: *Lantana sp*, *Parthenium sp*, *Tilapia sp*.

### D. Field study

1. Field study in ecology using both qualitative and quantitative studies (Checklist/Quadrat /Transect) from any one of the following bio-geographical area (plain/coastal/ forest/ Hills) with report submission.
2. Identification of flora with highlight on economic significance and importance to ecological balance
3. Identification of fauna with highlight on economic significance and importance to ecological balance
4. Choice of five plants of your neighbourhood and description in terms of height and leaf characteristics.
5. To describe: a) climate of an urban area b) yearly variation in suspended particulate matter in the same area.