

A- List of Experiments

60 Periods

1. Prepare a temporary mount to observe pollen germination-
2. Collect and study soil from at least two different sites and study them for texture, moisture content, pH and water holding capacity- Correlate with the kinds of plants found in them-
3. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organism-
4. Study the presence of suspended particulate matter in air at two widely different sites-
5. Study the plant population density by quadrat method-
6. Study the plant population frequency by quadrat method-
7. Prepare a temporary mount of onion root tip to study mitosis-
8. Study the effect of different temperatures and three different pH on the activity of salivary amylase on starch-
9. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc-

B- Careful observation of the following (Spotting):

1. Flowers adapted to pollination by different agencies (wind, insects, birds)-
2. Pollen germination on stigma through a permanent slide or scanning electron micrograph-
3. Identification of stages of gamete development, i-e-, T-S- of testis and T-S- of ovary through permanent slides (from grasshopper/mice)-
4. Meiosis in onion bud cell or grasshopper testis through permanent slides-
5. T-S- of blastula through permanent slides (Mammalian)-
6. Mendelian inheritance using seeds of different colour/sizes of any plant-
7. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colourblindness-
8. Controlled pollination - emasculation, tagging and bagging-
9. Common disease causing organisms like *Ascaris*, *Entamoeba*, *Plasmodium*, any fungus causing ringworm through permanent slides, models or virtual images- Comment on symptoms of diseases that they cause-
10. Two plants and two animals (models/virtual images) found in xeric conditions- Comment upon their morphological adaptations-
11. Two plants and two animals (models/virtual images) found in aquatic conditions- Comment upon their morphological adaptations-

Practical Work for Visually Impaired Students - Class XII

Note: The 'Evaluation scheme' and 'General Guidelines' for visually impaired students given at the end of this document may be referred to-

A. Items for Identification/ familiarity with the apparatus for assessment in practicals (All experiments)

- Soil from different sites- sandy, clayey, loamy;
- Small potted plants, Cactus/*Opuntia* (model), Large flowers, Maize inflorescence-
- Model of *Ascaris* and developmental stages of frog highlighting morula and blastula-

- Beaker, flask, petri plates, test tubes, aluminium foil, paint brush, bunsen burner/spirit lamp/water bath-
- Starch solution, iodine, ice cubes-

B. List of Practicals

1. Study of the soil obtained from at least two different sites for their texture-
2. Study of flowers adapted to pollination by different agencies (wind, insects)-
3. Identification of T-S of morula or blastula of frog (model)-
4. Study of Mendelian inheritance pattern using beads/seeds of different sizes/texture-
5. Preparation of pedigree charts of genetic traits such as rolling of tongue, colour blindness-
6. Study of emasculation, tagging and bagging by trying out an exercise on controlled pollination-
7. Identify common disease causing organisms like *Ascaris (Model)* and learn some common symptoms of the disease that they cause-
8. Comment upon the morphological adaptations of plants found in xerophytic conditions-

Note: The above practicals may be carried out in an experiential manner rather than recording observations-

निर्धारित पुस्तकें -

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