

Class XII – PRACTICALS 2023-24

Time Allowed: 3 Hours

Max. Marks: 30

S. No	Evaluation Scheme	Marks
1	One Major Experiment	5
2	One Minor Experiment	4
3	Slide Preparation	5
4	Spotting	7
5	Practical Record + Viva Voce	4
6	Investigatory Project and its Project Record + Viva Voce	5
	Total	30

A. List of Experiments

B. Major Experiment

1. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.

Minor Experiment

2. Study the plant population density by quadrat method. (Page-12)
3. Study the plant population frequency by quadrat method. (Page-15)

Slide Preparation

4. Prepare a temporary mount to observe pollen germination. (Page-9)
5. Prepare a temporary mount of onion root tip to study mitosis. (Page-18)

B. Study and observe the following (Spotting)

1. Flowers adapted to pollination by different agencies (wind, insects, birds). (Page-26)
(Grass, Sunflower, **Bird pollination**)
2. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice). (Page-35-36)
3. Meiosis in onion bud cell or grasshopper testis through permanent slides. (Page-39-42)
4. T.S. of blastula through permanent slides (Mammalian). (Page 44-45)
5. Mendelian inheritance using seeds of different colour/sizes of any plant. (Page 48-49)
6. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness. (Page 52-57) **Description not required**)
7. Controlled pollination - emasculation, tagging and bagging. (Page 60-62)
8. Common disease causing organisms like *Ascaris*, *Entamoeba*, *Plasmodium*, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause. (Page-64-71)
9. Models specimen showing symbiotic association in root nodules of leguminous plants, *Cuscuta* on host, lichens. (Page 73-74)