

Rajasthan Board Class 11

Biology Practical Syllabus

प्रायोगिक (Practical)

A. List of Experiments

1. Study and describe three locally available common flowering plants from each of the following families (Solanaceae, Fabaceae and Liliaceae) Types of root (tap or adventitious), stem (herbaceous/woody) leaf arrangement/shapes/venation/simple or compound).
2. Preparation and study of T.S. of dicot and monocot roots and stems (primary).
3. Study of osmosis by potato osmometer.
4. Study of plasmolysis in epidermal peels (e.g. Rhoec leaves).
5. Study of distribution of stomata in the upper and lower surface of leaves.
6. Comparative study of the rates of transpiration in the upper and lower surface of leaves.
7. Test for the presence of sugar, starch, proteins and fats. To detect them in suitable plant and animal materials.
8. Separate plant pigments through paper chromatography.
9. To study the rate of respiration in flower buds and germinating seeds.
10. To study effect of salivary amylase on starch.
11. To test the presence of urea, sugar, albumin and bile salts in urine.

B. Study/observation of the following (spotting)

1. Study parts of a compound microscope.
2. Study of the specimens and identification with reasons-Bacteria, Oscillatoria, Spirogyra, Rhizopus, Mushroom, Yeast, Liverwort, Moss, Fern, Pines, one monocotyledon and one dicotyledon and one lichen.
3. Study of specimens and identification with reasons-Amoeba, Hydra, Liverfluke, Ascaris, Leech, Earthworm, Prawn, Silkworm, Honeybee, Snail, Starfish, Shark, Rohu, Frog, Lizard, Pigeon and Rabbit.
4. Study of tissues and diversity in shapes and sizes of plant and animal cells (e.g. palisade cells, guard cells, parenchyma, collenchyma, sclerenchyma, xylem, phloem, squamous epithelium, muscle fibres and mammalian blood smear) through temporary/permanent slides.
5. Study of mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides.
6. Study of different modifications in root, stem and leaves.
7. Study and identify different type of inflorescences.
8. Study of imbibition in seeds/ raisins.
9. Observation and comments on the experimental set up on :
 - (a) Anaerobic respiration
 - (b) Phototropism
 - (c) Apical bud removal
 - (d) Suction due to transpiration
10. To Study human skeleton and different types of joints.
11. Study of morphology of earthworm, cockroach and frog through models/preserved specimens.

Prescribed Books -

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