

Syllabus

SYLLABUS OF BIOLOGY PRACTICALS FOR CLASS-11

EXAMINATION OF CENTRAL BOARD OF SECONDARY EDUCATION, NEW DELHI.

EVALUATION SCHEME FOR EXAMINATION-11

Time : 3 Hours

30 Marks

60 Periods

(i) One Major Experiment	5 Marks
(ii) One Minor Experiment	4 Marks
(iii) Slide Preparation	5 Marks
(iv) Spotting	7 Marks
(v) Practical Record + Viva Voce	4 Marks
(vi) Project Record + Viva Voce	5 Marks

Total

30 Marks

PRACTICALS SYLLABUS

PART-A

LIST OF EXPERIMENTS

1. Study and describe three locally available common flowering plants, one from each of the families Solanaceae, Fabaceae and Liliaceae including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams).
Types of root, (Tap and adventitious); stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and 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 these in suitable plant and animal materials.
8. Separation of plant pigments through paper chromatography.
9. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.
10. Test the presence of urea in urine.
11. Detect the presence of sugar in urine.
12. Detect the presence of albumin in urine.
13. Detect the presence of bile salts in urine.

PART-B

STUDY/OBSERVATION OF THE FOLLOWING (SPOTTING)

1. Study of the parts of a compound microscope.
2. Study of the specimens/slides/models and identification with reasons-Bacteria, Oscillatoria, Spirogyra, Rhizopus, Mushroom, Yeast, Liverwort, Moss, Fern, Pine, one monocotyledonous plant and one dicotyledonous plant and one lichen.
3. Study of virtual specimens/slides/models 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 (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 tips cells and animals cells (grasshopper) from permanent slides.
6. Study of different modifications in root, stem and leaves.
7. Study and identification of different types of inflorescences (cymose and racemose).
8. Study of imbibition in seeds/raisins.
9. Observation and comments on the experimental set up for showing :
(a) Anaerobic respiration, (b) Phototropism
(c) Effect of apical bud removal, (d) Suction due to transpiration
10. Study of human skeleton and different types of joints with the help of virtual images/ models only.
11. Study of external morphology of cockroach through virtual images/models.