

# **BIOLOGY**

BIOLOGY

**SUBJECT SPECIFIC GUIDELINES FOR CLASS XI BIOLOGY THEORY PAPER**

1. The theory paper shall be of 70 marks and of 3 hrs duration.
2. The syllabus shall be in accordance with the core syllabus provided by COBSE.
3. The questions shall be from all the units.
4. The question paper shall have four sections A,B,C,& D. Section A will have 9 questions of one mark each. Section B will have 7 questions of 2 marks each , Section C will have 11 questions of 3 marks each and Section D will have 3 questions out of which two questions will be of 5 marks each and one question of 4 marks. Total number of questions will be 30.
5. All questions will be compulsory.
6. There will be no overall choice. However an internal choice will be provided in one question of section B ,one question of section C and all the three questions of section D. A student has to attempt only one of the alternatives in such questions.
7. The student shall draw correct and neat diagram wherever asked.

## BROAD GUIDELINES FOR SUBJECT SPECIFIC PRACTICALS

1. The practical examination shall be of 30 marks and 3hr. duration.
2. The following skill shall be evaluated during practical exam
  - a) procedural skill    b) observational skill
  - c) drawing skill        d) reporting and interpretative skill
3. Originality of investigatory project shall be given more importance than volume of report.
4. Scheme for evaluation during practical exam:

### PART A(10 marks)

S.No	Area	Marks	Criteria	Marks Distribution
1	Practical file and viva on practicals	4+2	Complete and well maintained file	2
			Correct reporting of practical done	2
			Viva on practicals	2
2	Investigatory Project and viva	2+2	Investigatory Project report	2
			Viva Voce on Investigatory Project	2

### PART B (20 marks)

3	Description of locally available flowering plant	5	Procedural skill	3
			Observation	0.5
			Drawing	1
			Interpretation	0.5
4	Physiology experiment	5	Procedural skill	3
			Observation	1
			Drawing	-

			Interpretation	1
5	Slide Preparation	3	Procedural skill	1
			Observation	1
			Drawing	1
			Interpretation	-
6	7 spots	7(1 mark each)		-
			Observation (identification)	3.5
			Drawing	-
			Interpretation(comment)	3.5

## LIST OF SUBJECT SPECIFIC COMPULSORY EXPERIMENTS

### Description of locally available flowering plant

1. Study and describe one locally available common flowering plant from the family Solanaceae , Fabaceae & Liliaceae including dissection and display of floral whorls and anther and ovary to show number of chambers. Types of roots (Tap roots and adventitious root); stem (herbaceous and woody); Leaf (Arrangement, shape, venation, simple and compound).

### Physiology Experiment

2. Study of osmosis by potato osmometer.
3. Comparative study of the rates of transpiration in the upper and lower surface of leaf.
4. Test for the presence of sugar, starch, protein and fats in animal/plant material.
5. Separation of plant pigments through paper chromatography.
6. To test the presence of urea in urine.
7. Test the presence of one abnormal constituent out of sugar and albumin in urine.

### For slide preparation

8. Study of plasmolysis in epidermal peels (e.g.Rhoeo leave)
9. Study of distribution of stomata in the upper and lower surface of leaves.
10. Preparation and study of T.S of dicot and monocot roots and stems (primary).

### For Spotting

11. One lower plant/algae
12. One vertebrate/invertebrate
13. One plant tissue/animal tissue
14. One stage of mitosis.
15. One experimental setup.
16. One inflorescence
17. One modified root/stem/leaf.
18. Bones/joints of human skeleton.
19. External morphology of cockroach.