



21/12/23

**School of Biological Sciences
Doon University
Dehradun, Uttarakhand**
Question Paper: End-Semester Examination
Session: Jul 2023 – Dec 2023

B.Sc. Biological Sciences (Third Semester)

Course: Plant Biochemistry

Course Code: BSE101

Total Marks: 50

Maximum Time: 2:00 Hrs

PART I Give answers to any five questions:

(Marks: 2 X 5 = 10)

1. Name two synthetic auxins.
2. Name two media for plant tissue culture.
3. What is Phototropin? What are the primary functions of Phototropins?
4. What are True alkaloids and Pseudoalkaloids? Give examples.
5. What are Gerontoplasts? What are the characteristics of gerontoplasts?
6. What are the importance of essential oils?

PART II Give answers to any four questions:

(Marks: 5 X 4 = 20)

7. Explain Anther culture with diagram.
8. Describe the functional roles of Cytokinins and Abscisic acid in plant growth and development.
9. Explain Isoprene rules with examples.
10. What are Saponins? What are the characteristic features of Saponins?
11. Describe the structure and functions of Cytoskeletons in plant cell with diagram.
12. Explain the different types of Somatic Embryogenesis with diagram. What are the applications of Somatic Embryogenesis?

PART III Give answers to two questions:

(Marks: 10 X 2 = 20)

13. Describe the structure and functional role of Phytochrome system in photoperiodism with example.
14. Explain the procedure of protoplast culture for the production of new plantlets with diagram. What are the applications of protoplast culture?
15. What are phenolic compounds? Describe the structural classification of phenolic compounds.