

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2025
(Regular/Improvement/Supplementary)**

**BOTANY
FBOT3C07 - PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY**

Time: 3 Hours

Maximum Weightage: 30

Part A: Answer any *four* questions. Each carries *two* weightage.

1. Define photorespiration.
2. Write a short note on water potential.
3. What is SPAC?
4. Write a short note on PRPP.
5. Define oxidative phosphorylation.
6. Elaborate on GOGAT Pathway.
7. What is ionization of amino acids?

(4 × 2 = 8 weightage)

Part B: Answer any *four* questions. Each carries *three* weightage.

8. Write an account on fatty acids.
9. Describe the genetics of nitrogen fixation.
10. Explain two pigment systems.
11. Write an account on mechanism of enzyme action.
12. Explain two phases of glycolysis.
13. Write an account on secondary metabolites.
14. Elaborate on mineral ions absorption in plants.

(4 × 3 = 12 weightage)

Part C: Answer any *two* questions. Each carries *five* weightage.

15. Explain the mechanism of phloem transport.
16. Write a detailed account on classification of carbohydrates.
17. Discuss the structure of protein.
18. Explain electron transport chain in mitochondria.

(2 × 5 = 10 weightage)