

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2020**  
**BOTANY**  
**FBOT3C07 - PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY**

**Time: Three Hours**

**Maximum Weightage: 30**

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

1. Differentiate absorption spectra and action spectra.
2. Write a note on SPAC.
3. What is phytochrome?
4. Explain gluconeogenesis.
5. Write a note on PRPP.
6. What are protein domains?
7. Explain sources and sinks concept.

**(4 × 2 = 8 weightage)**

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

8. Write an account on structure and properties of fatty acids.
9. Explain Biochemistry of nitrogen fixation.
10. Write an account on physiology of seed germination.
11. Write an account on secondary metabolites.
12. Explain the structure of protein.
13. Explain enzyme activation.
14. Describe amphibolic nature of citric acid cycle.

**(4 × 3 = 12 weightage)**

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

15. Discuss Electron Transport Chain and synthesis of ATP in mitochondria.
16. Write an account on Classification of carbohydrates.
17. Explain photosynthetic carbon reduction cycle in plants.
18. Write an account on chemical composition of nucleotides. Describe its structure and function.

**(2 × 5 = 10 weightage)**