**ST.JOSEPH’S UNIVERSITY, BENGALURU -27**

**M.Sc. BOTANY – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**BO 8322 – Plant Physiology and Metabolism**

**Time: 2 Hours Max Marks: 50**

**This paper contains 1 printed page and 3 parts**

**Draw labelled diagrams and give examples where required**

1. **Answer any FIVE of the following in two or three sentences 5 × 2 = 10**
2. Exergonic reactions
3. Amylose and amylopectin
4. Secondary structure of proteins
5. Lock and key model
6. Photorespiration is considered a wasteful process, justify
7. Glyoxylate pathway
8. Role of Jasmonic acid in plants
9. **Write critical notes on any FIVE of the following 5 × 6 = 30**
10. Synthesis and structure of important plant glycolipids
11. Derive the Michelis Menten equation
12. Schematic representation of C4 cycle
13. Factors affecting rate of transpiration (any 6)
14. Any one theory that you have studied which explains stomatal movements
15. Process of nodulation in legumes. Add a note on the factors responsible for it
16. Physiological significance of Ethylene and its applications
17. **Give a comprehensive account of any ONE of the following 2 × 10 = 20**
18. Schematic representation of Glycolysis. Add a note on its significance
19. Ultrastructure of ATP synthase and the mechanism of ATP synthesis