

**Register Number:**

**Date:**

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-560027**

**M.SC BOTANY II SEMESTER**

**SEMESTER EXAMINATION -APRIL 2020**

**BO 8318 – PLANT PHYSIOLOGY AND METABOLISM**

**Time: 2 ½ hrs. Max. Marks: 70**

**This question paper has ONE printed page and THREE parts**

**Draw diagrams and write examples wherever necessary**

1. **Explain or define any TEN of the following in two or three sentences 10x2=20**
2. Lactic acid dehydrogenase
3. Phosphorescence
4. Water potential of a solution is always negative. Give reasons.
5. Light harvesting complex
6. Represent schematically Sayre & Scarth hypothesis
7. Precursor for synthesis of Brassinosteroids & their role as phytohormones
8. Steps in Nitrogen cycle
9. RUBISCO
10. PEP Carboxylase
11. Emerson effect
12. Which are the widely distributed photosynthetic pigments? Mention their functions
13. Michelis-Menten equation
14. **Write critical notes on any FIVE of the following 5x6=30**
15. Structure of ATP synthase
16. Properties of enzymes
17. Schematic representation of Citric acid cycle
18. Distinguish between symbiotic & asymbiotic N2 fixation
19. Z-scheme of photosynthetic electron transport
20. Mechanism of phloem loading & unloading
21. Explain the enzyme-substrate binding mechanisms with suitable models.
22. **Write a comprehensive account of any TWO of the following 2x10=20**
23. Give an account of Calvin cycle
24. Energetics of β-oxidation of 18C fatty acid
25. Physiological effects & mechanism of action of Auxins

**BO 8318\_A**