

Register Number:

**Date: 15/04/2019**

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**M.Sc. BOTANY - II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2019**

**BO 8418 – Methods in Plant Sciences**

**Time- 2 ½ Hours Max. Marks - 70**

**This paper contains ONE printed page and THREE parts**

**Draw diagrams wherever necessary**

**A. Define any TEN of the following 10x2=20**

1. Biomechanics

2. Colloids

3. Abbe’s condenser

4. Electron gun

5.Camera lucida

6. Tyndall effect

7. Thin layer chromatography

8.Isopycnic centrifugation

9. Partition or distribution coefficient

10. Detectors used in IR spectroscopy

11. Fixatives and clearing agents

12. Isocratic and gradient elution

**B. Write critical notes on any FIVE of the following 5x6=30**

13. Components of a research paper

14. Atomic absorption spectroscopy

15. HPLC principle and different types of columns used in it

16. Nano-biotechnology and its applications

17. Principles of phosphorescence and fluorescence and their applications

18. Microtome: Types and their applications

19. Autoradiography

**C. Give a comprehensive account of any TWO of the following 2x10=20**

20. Principle, instrumentation, and applications of TEM, compare it with SEM

21. Principle, instrumentation and applications of NMR

22. a) Agarose gel electrophoresis; b) Gas chromatography

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