

Registration Number:

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

**M.Sc. BOTANY – 2nd SEMESTER**

**SEMESTER EXAMINATION: APRIL 2024**

**(Examination conducted in May / June 2024)**

**BO 8423: TOOLS AND TECHNIQUES IN PLANT SCIENCES**

**(For current batch students only)**

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

**This paper contains TWO printed pages and THREE parts**

**\*Draw diagrams wherever necessary**

**PART-A**

**Write a few sentences about any FIVE of the following. 2X5=10**

1. How will you use the Mendeley for writing bibliography?
2. Draw the path of light in DIC microscopy?
3. Differentiate the Van der Walls forces from London Forces?
4. How to do double staining of plant materials?
5. Give examples of anionic and cationic detergents?
6. What are radio isotopes and give examples?
7. What are the main types of rotors used in laboratory centrifuges?

**PART-B**

**Answer any FIVE of the following in detail. 6X5=30**

1. How Biomechanics is applicable in your daily life?
2. Compare and contrast the types of Colloids?
3. How will you demonstrate the Phase contrast microscope in laboratory?
4. What are the aberrations you see in light Microscopy?
5. Write the flow chart of cryopreservation of plant materials?
6. Draw a neat labelled diagram of NMR spectroscope?
7. Write the differences between Agarose Gel Electrophoresis and Polyacrylamide Gel Electrophoresis?

**PART-C**

**Answer any ONE of the following in detail. 10X1=10**

1. Give a detailed account of Bioluminescence and add a note on its uses?
2. Explain the working of atomic absorption spectrometry for detection of minerals in soil?