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**NY—60—2023**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**M.Sc. (First Year) (Second Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2023**

**(New/CBCS Pattern)**

**BOTANY**

**Paper-VI**

**(Bioinstrumentation and Methods in Biology)**

**(Wednesday, 6-12-2023)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—3 Hours*

*Maximum Marks—75*

*N.B. :— (i) Attempt all questions.*

*(ii) All questions carry equal marks.*

*(iii) Illustrate your answers with suitable diagram, scheme etc.*

1. Describe working and application of compound microscope.

*Or*

Describe working and application of scanning and transmission electron microscope.

2. Describe the principle and applications of thin layer chromatography.

*Or*

Describe the sterilization by filtration methods.

3. Describe the principles and techniques of colorimeter, UV-Visible spectrophotometer.

*Or*

Describe the principles and techniques of Atomic Absorption Spectrometry.

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4. Describe the principle and applications of PAGE.

Or

Describe the method of southern and northern blotting techniques. Add a note on applications in life sciences.

5. Write short notes on (any *three*) :

- (i) Safe use of laboratory equipments
- (ii) pH meter
- (iii) Beer-Lambert's Law
- (iv) RFLP techniques.

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