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25-MB-23

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION
MAY - JUNE 2025**

MICROBIOLOGY

Paper - III

[Instrumentation]

[Max. Marks : 75]

[Time : 3:00 Hrs.]

[Min. Marks : 26]

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt all five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Describe the principle and working of Bright Field Microscope.

OR

Write note on following -

- i) Dark Field Microscope.
- ii) Fluorescence microscope.

Q. 2 Describe the principle, working and application of analytical centrifugation.

OR

Describe differential centrifugation.

Q. 3 Explain in detail (**any one**) -

- i) Adsorption column chromatography.
- ii) Paper Chromatography.

Q. 4 Describe the principle, working and application of colorimetry.

OR

Describe theory, instrumentation and application of ultra violet spectroscopy.

Q. 5 Write notes on **any one** -

- i) Detection and measurement of radio activity.
- ii) Geiger - Muller counter.