

I Semester M.Sc. Degree Examination, May 2024 (CBCS) (2019 - 20 and Onwards) FORENSIC SCIENCE

FS – 103: Analytical Instruments and Techniques

Time: 3 Hours

Max. Marks: 70

PG

Instructions: 1) Answer all the Parts.

2) Draw diagrams wherever necessary.

PART - A

Write short notes on the following.

 $(4 \times 2 = 8)$

LIBRA

- 1. Sensitivity and detection limit.
- 2. Energy dispersive X-ray.
- 3. Atomic Spectra.
- 4. Nuclear reaction.

PART - B

Write critical notes on the following.

 $(4 \times 8 = 32)$

Static characteristics.

OR

Dynamic characteristics.

6. Comparison microscopy.

OR

Polarized light microscopy.

7. Beer-Lambert's law.

OR

Phenomenon of absorption and emission spectroscopy.

P.T.O.



8. Radio chemical techniques.

OR

Classification of chromatography techniques.

PART - C

Answer the following.

 $(2 \times 15 = 30)$

9. Explain the basic concepts of method validation.

OR

Briefly explain the construction, principle and working of Scanning Electron Microscope and Transmission Electron Microscope.

10. Explain briefly the construction, principle and working of Ultraviolet and visible spectrophotometry.

OR

Describe chromatography techniques and its classification.