

D 52809

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2023**

(CBCSS)

Forensic Science

FSC 1C 03—INSTRUMENTAL TECHNIQUES

(2020 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer any *four* of the following. Short Answer Type Questions. Weightage 2 :

- 1 What is preparative electrophoresis ?
- 2 Write a note on forensic applications of comparison microscope.
- 3 What is the general principle of Electrophoresis ?
- 4 What is GC-MS.
- 5 What are the different sources of IR radiation ?
- 6 Discuss different applications of X-Ray spectroscopy.
- 7 Give different types of Chromatography.

(4 × 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage 3 :

- 8 Write a note on interaction of Electromagnetic radiation with matter.
- 9 Describe theory of IR absorption.
- 10 Differentiate between Atomic absorption spectroscopy and atomic fluorescence spectrometry.
- 11 Discuss forensic applications of chromatography.
- 12 Explain different types of X-Ray spectroscopy.
- 13 Explain the working principle of Raman spectroscopy.
- 14 What is the basic principle of Microscopy ?

(4 × 3 = 12 weightage)

**Turn over**

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5 :

- 15 Write a note on forensic applications of Chromatography.
- 16 Explain the instrumentation of UV-Visible spectroscopy using block diagram.
- 17 What is NMR Spectroscopy ? Write a note on its forensic applications.
- 18 Write a note on different types of centrifugation techniques.

(2 × 5 = 10 weightage)