Roll No…….. **Total No. of Printed Pages: 01**

Total No. of Questions: [09]

B.Sc. (Forensic Science) (Semester – 3rd)

TECHNOLOGICAL METHODS IN FORENSIC SCIENCE

Subject Code: BHFSS1302

Paper ID: 21132210

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Define Atomization.
b) Define Retention factor
c) Write a brief note on Packed Columns.
d) Role of Monochromator in Spectroscopic Techniques.
e) Differentiate between Optical and Electron Microscope (Any four Points)
f) Significance of 3D Photography in Criminal Investigation
g) Principle of AES
h) Explain criteria for a compound to be IR active.
i) Explain Blue Shift & Red Shift occurring in UV-Visible Spectroscopy.
j) Briefly talk about Molecular Vibrations

Section – B **(5 marks each)**

Q2. Write a note on detector used in Gas chromatography.

Q3. Define Electrophoresis. Write a brief note on its application in Forensic Science.

Q4. Write about different sources used in AAS.

Q5. Write a brief note on Principle and Instrumentation of NAA.

Q6. Write a note on Infrared and UV Photography and its importance in Investigation.

Section – C **(10 marks each)**

Q7. Define photography. Explain in detail about different types of Photography done on the crime. Further Explain the significance of Videography in Crime scene investigation.

Q8. Write a detail note on SEM along with its parts, working and application in Forensic trace evidence analysis.

Q9. Explain the principle of Ultraviolet-Visible spectroscopy. Also write about the instrumentation and working along with its Forensic application.