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**B.Sc. (Forensic Science) (Semester – 3<sup>rd</sup>)**  
**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.