

M.SC.(Phy.) Semester - 4 (CBCS) Examination
May/June-2021 (NEW COURSE)
Materials Characterization (Elective)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
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Que-1 Answer The Following Questions. (14)

- A. Explain: A powder pattern is a crystal's fingerprint.
- B. Explain the effect of stress on powder pattern with suitable examples.

Que-2 Answer The Following Questions. (14)

- A. Write a note on Transmission Electron Microscopy.
- B. Discuss Scanning Tunneling Microscopy in detail

Que-3 Answer The Following Questions. (14)

- A. Differentiate two and four probe resistivity measurements. Write a brief note on four probe resistivity.
- B. Write a short note on Ferroelectricity. Also describe P-E loop.

Que-4 Answer The Following Questions. (14)

- A. Write a note on UV-viz spectrometer, a typical instrumentation.
- B. Write a brief note on FTIR.

Que-5 Answer The Following Questions. (14)

- A. Write a note on Vibrating Sample Magnetometer.
- B. Explain DTA and DSC in detail.
