JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

Ph.D-I Semester (PMS)

COURSE CODE (CREDITS): 13P1WPH112 (03)   MAX. MARKS: 15

COURSE NAME: Material Characterization

COURSE INSTRUCTORS: PBB   MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems

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Q1. What are the various optical characterization methods? Give a brief description for each of them along with schematic diagram.   **[3-marks]**

Q2. What are the various information we can extract from XRD data?

[3-marks]

Q3. State the reason for the variation in intensities of different (hkl) peaks in XRD spectra.

[3-marks]

Q4. Why copper is usually chosen as target material in XRD?

[3-marks]

Q5. Discuss the method of calculating average crystallite size from XRD spectra.

[3-marks]