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Test -1 EXAMINATION, September 2019

PhD (Physics), Semester-I

COURSE NAME: Materials Characterization

MAX.MARKS:15

COURSE CODE:13P1WPH112

MAX.TIME: 1 hour

Note: Attempt all questions. Carrying of mobile phones during examinations will be treated as a case of unfair means. Marks are indicated against each question in square brackets.

- Q.1. Define unit cell and lattice parameters. [1]
- Q.2. Differentiate between particle size and crystallite size.[1]
- Q.3. What contributes FWHM of XRD peak profile? [2]
- Q.4. How to separate crystallite size broadening and strain broadening? [3]
- Q.5. Discuss all the essential parts of X-ray diffractometer.[1]
- Q.6. Discuss in detail the compositional analysis using TEM.[3]
- Q.7. Discuss HRTEM and SAED pattern in TEM. [2]
- Q.8. Explain sample preparation methods in TEM. [2]