

Dr. Rajini

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAHGAT

TEST-2 EXAMINATION-APRIL 2019

PH.D. PHYSICS

Course Code: 13P1WPH112

MAX. MARKS:25

Course Name: Materials Characterization

Max. TIME:1.5 HRS

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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- Q.1. Explain all the instrumentation of UV-VIS spectroscopy along with basic diagram of instrumental setup. [3]
- Q.2 Discuss about characteristic and Bremsstrahlung radiation in detail. [3]
- Q.3. How to represent x-ray diffraction data? Explain the anatomy of the XRD pattern with the help of diagram. [4]
- Q.4. How to determine phase from XRD data both qualitatively and quantitatively? [4]
- Q.5. How to calculate crystallite size and strain from XRD data graphically? [4]
- Q.6. How does AFM works and how the forces get measured in AFM? [3]
- Q.7. Discuss about different modes of imaging in AFM with their advantages and disadvantageous. [4]