

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

Ph.D. I Semester

COURSE CODE: 13P1WPH112

MAX. MARKS: 25

COURSE NAME: MATERIALS CHARACTERIZATION

COURSE CREDITS: 3

MAX. TIME: One Hour Thirty Minutes

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

1. Discuss in detail Raman spectroscopy. Describe its various characterization modes. [6 marks]
2. Give a detailed account of Photoluminescence spectroscopy. Discuss the various aspects of nanomaterials that can be analyzed using the same. [6 marks]
3. Discuss in detail Absorption spectroscopy. What are its uses? [6 marks]
4. What is Hall Effect and illustrate using diagram how are you going to measure the Hall voltage in a sample. Analyse the variation in Hall parameters with varying magnetic field and carrier concentration. [7 marks]