

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATIONS-2022

B.Tech-IV Semester (BT)

COURSE CODE (CREDITS): 10B11PH212 (4)

MAX. MARKS: 25

COURSE NAME: Biophysical Techniques

COURSE INSTRUCTORS: Dr. Ragini Raj Singh

MAX. TIME: 1 Hour and 30 Minutes

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

- Q1. Why SEM is the most versatile technique for scientists and researchers. [3]
- Q2. How do we get an image in SEM? Discuss sample and e-beam interactions in SEM. [4]
- Q3. What kinds of signals are obtained in SEM? What are the secondary electrons in SEM? [3]
- Q4. What is the difference between conventional and environmental SEM? [3]
- Q5. Discuss dispersive energy analysis and electron diffraction in TEM. [4]
- Q6. Discuss the preparation of Biological samples for TEM analysis. [3]
- Q7. Explain the functioning of Atomic force microscopy with its different modes of operation. Which mode of operation is best suitable for biological samples? [5]