Code No: 138FR **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, September - 2020
CHARACTERIZATION OF NANOMATERIALS
(Computer Science and Engineering)

Time: 2 Hours **Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks
- - -

1. Explain the theory of operation and principle of Electron Microscope. [15]
2. Explain about the biological sample preparation and applications of SEM. [15]
3. What is Transmission Electron Microscope and write their applications? [15]
4. Explain Electron diffraction and High Resolution TEM. [15]
5. What are the different modes of imaging including sketches? [15]
6. Discuss about the interactive forces, force curves and force measurements in Atomic force microscope. [15]
7. What is single crystal X –Ray diffraction? How does it work, write applications and limitations of it. [15]
8. Explain about Crystallite size analysis using Scherer formula and Williamson – Hall equation. [15]

---ooOoo---

JNTUH USED PAPER SEP-2020