

R16

Code No: 138FR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, July - 2021

CHARACTERIZATION OF NANOMATERIALS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

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

1. Write advantages and disadvantages of electron microscope over optical microscope? Explain. [15]
2. How to adjust the beam spot size in Scanning electron microscope? Explain. [15]
3. Differentiate the Bright field imaging and Dark field imaging. [15]
4. Explain the principle and instrumentation of AFM. [15]
5. Explain in detail about the IR spectroscopy. [15]
6. Discuss about the Primary Metallic Crystalline Structures of BCC, FCC and HCP. [15]
7. What is Bragg's law of diffraction? Explain the powder method. [15]
8. Explain in detail about the Raman spectroscopy. [15]

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