

Time - 1 Hour.

Attempt Any Two Questions.

Q.1 To determine the resistivity of semiconductors by Four Probe Method in detail.

Q.2 What is Laser? Describe in detail Absorption, Spontaneous emission, and Stimulated emission. Describe the working Principle of Semiconductor diode Laser.

Q.3 Define a ~~nanoparticle~~ nanoparticle. Explain DOS of quantum structures of different nanomaterials. What is meant by top-down approach in NP synthesis.

Q.4 Explain UV-Vis Spectroscopy & how to calculate the Bandgap.