

- Q-3 Attempt all questions (14)**
- 1 Write a note on: Challenges in Nano technology. (5)
 - 2 What is Aerosol synthesis? Explain. (5)
 - 3 Write a note on: Vapor- Liquid-Solid (VLS) growth. (4)

SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. Define: Super lubricity.
 - b. What is Sensor?
 - c. What is single molecule electronic device?
 - d. On which factors the characterization of Nano materials depends?
 - e. Write down a shortcoming of TEM.
 - f. Define: Surface plasma Resonance.
 - g. Define; Super paramagnetics.

- Q-5 Attempt all questions (14)**
- 1 Explain about a nano-electronic devices called computers and memory storage. (7)
 - 2 Define and explain: Nano sensor. State its applications too. (7)

OR

- Q-5 Attempt all questions (14)**
- 1 Write a short note on: Nanorobots/ Nano bots. (5)
 - 2 Write a short note on; Micro electro mechanical system. (5)
 - 3 Explain about QCM- Quartz crystal microbalance. (4)

- Q-6 Attempt all questions (14)**
- 1 Explain in brief about small angle X-ray scattering. (7)
 - 2 Write a short note on: Scanning electron Microscopy. (7)

OR

- Q-6 Attempt all Questions (14)**
- 1 Write a note on: X-ray diffraction. (5)
 - 2 State the mechanical properties of Nano-materials. (5)
 - 3 What is Surface scattering? Explain. (4)

