

Assignment
CHE-311
Elective (Nano Materials And Nano Technology)
Sem VI 2018
Unit Test I &II

UNIT TEST-I

UNIT -I :-

*** Questions for Long Answer**

- (1) Write a short note on: SOL-GEL Method
- (2) Explain Laser Vaporization (Ablation) Method
- (3) What is sputtering? Discuss about different types of sputtering.

UNIT-II

*** Questions for Long Answer**

- (1) Discuss about the various Synthesis method for Fullerenes Write a brief note on the purification of Fullerenes.
- (2) Define on Carbon nanotubes? What are the types of carbon nanotubes? Highlight the properties of carbon nanotubes?
- (3) Write a note on Graphene.

*** Questions for Short Answer:**

- (a) One nano meter is equal to how many meters ?
- (b) Give the types of Quantum Dots.
- (c) Define: Nanomaterials.
- (d) Write colours of bulk gold metal and gold metal nanoparticles.
- (e) Write synthesis methods for manufacturing of Nanotubes.
- (f) Write applications of quantum dots?
- (g) What are nanofibers?
- (h) What is the full form of MWNTs?
- (i) What is the full form of “ESCA”?
- (j) Give the types of Nano tubes.

UNIT TEST-II

UNIT-III

*** Questions for Long Answer**

- (1) Discuss “ Electron Spectroscopy for Chemical Analysis” [ESCA]
- (2) What is the basic principle of Scanning Electron Microscope [SEM] ? How they differ from optical Microscope.Explain.
- (3) Discuss X-ray diffraction technique for Nanomaterials with diagram.

UNIT-IV

*** Questions for Long Answer**

- (1) Write a note on applications of nanotechnology in electronics **OR** Explain application of nanomaterial in the field of electronics display and devices.
- (2) Write the applications of nanotechnology in biotechnology and medical field
- (3) Discuss application of nanotechnology in the field of solar energy.

*** Questions for Short Answer:**

- (1) What is the full form of XRD?
- (2) What is the short form of Dynamic Light Scattering?
- (3) What is the difference between SEM & TEM ?
- (4) Who discovered Auger electron?
- (5) Give one word used for “Spin based electronics”.
- (6) What is spintronics?
- (7) Give one application of zinc oxide in the context of nanomaterial.
- (8) Give name of one scientist associated with Nanoscience.
- (9) Give one example of use of Nano materials as photocatalysts.