

**St.Joseph's College of Engineering , Chennai – 119.**  
**St.Joseph's Institute of Technology , Chennai – 119.**

**Department of Science (Chemistry)**

**UNIT – V NANOCHEMISTRY**

**PART – A**

1. What are nanomaterials?
2. Mention the various properties which get altered by size reduction.
3. What are nanowires? Give two examples of semiconducting nanowires.
4. What are carbon nanotubes?
5. What are the advantages of CVD process?
6. Distinguish between SWCNT and MWCNT.
7. Differentiate between molecules, nanomaterials and bulk materials.
8. What is laser ablation?

**PART – B**

1. (a) Describe the size dependent properties of nanomaterials.  
(b) What are nanoparticles? Mention their properties and applications.
2. (a) Discuss various types of synthesis involved in the preparation of Nanomaterials.  
(b) What are nanoclusters? Explain thermolysis method for the synthesis of nanoclusters.
3. (a) Discuss electrodeposition method for the synthesis of nanowires.  
(b) What are CNTs? Explain their applications.
4. (a) What are CNTs? Explain Laser ablation method for synthesis of CNTs.  
(b) What are nanorods? Describe the synthesis of semiconducting nanorods by solvothermal techniques.