

Code No: **R42033****R10****Set No. 1****IV B.Tech II Semester Supplementary Examinations, July/August - 2017****NANO TECHNOLOGY
(Mechanical Engineering)****Time: 3 hours****Max. Marks: 75****Answer any FIVE Questions
All Questions carry equal marks**

- 1 a) What is nano technology? Why Nano technology? [8]
b) Write the basics of quantum mechanics. [7]
- 2 a) Write the applications of Silicon Carbide and its Properties [8]
b) What are the Problems of Preparing nano Particles [7]
- 3 a) Explain the weibull theory. [7]
b) Write the Nano powder preparation and characteristics .What are the steps required to measure the flexural strength. [8]
- 4 a) Explain the preparation of nano particles and conductivity measurements. [8]
b) Write the Electro optic and acousto optic effect [7]
- 5 a) List out the advantages of electro deposition for the synthesis of nano materials [8]
b) Discuss the General principles of Sol-Gel process [7]
- 6 a) Explain about Scanning Electron microscopy [8]
b) Write about X-Ray Diffraction. [7]
- 7 a) What are the Different types of inorganic materials used for the synthesis of hybrid nano-bio assemblies [8]
b) Describe the Current status of nano Biotechnology [7]
- 8 a) Explain the Nanotechnology in Diagnostics applications [8]
b) Write about Molecular Nanomechanic. [7]