

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VII MECHANICAL : WINTER- 2022
SUBJECT : NANOTECHNOLOGY

Day : Thursday

Time : 02:30 PM-05:30 PM

Date : 15-12-2022

W-13463-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

Q.1 What is difference between nanoscience and nanotechnology? Explain length scale of different structures in it. [10]

OR

Q.1 Define nano structured material? What structures can be made with nanotechnology? [10]

Q.2 Discuss the classification of Nanomaterials in detail. [10]

OR

Q.2 What are the magnetic properties of nanomaterials? [10]

Q.3 What are the advantages and disadvantages in mechanical synthesis of nanopowders? [10]

OR

Q.3 List any four bottom up approaches for synthesis of nanopowders and explain anyone of them in detail? [10]

Q.4 What are the characteristics of nanoparticles that should possess by any fabrication technique? [10]

OR

Q.4 Explain the working of scanning electron microscope (SEM) with neat sketch. [10]

Q.5 What are the uses of nanoparticles in consumer products? [10]

OR

Q.5 Write short note on Nanomedicines. [10]

Q.6 What safety issues are associated with nanotechnology? [10]

OR

Q.6 What are potential harmful effects of nanoparticles? [10]

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