

Notes.

1. Question .No is compulsory.
2. Attempt any 3 questions from Q.No. 2 to 6.
3. All questions carry equal marks
4. Draw diagrams where necessary

- Q.1 Write short notes on the following 20M
1. Nanomaterials in cosmetics
  2. Nanotubes
  3. Nanochips
  4. Synthesis of nanodrugs
  5. Dendrimers
- Q.2 a) Discuss the analysis of biomolecular structure by Atomic Force Microscopy ? 10M  
b) What are Quantum dots? Explain the synthesis and applications of Quantum dots. 10M
- Q.3 a) Why the properties of a material changes at a nanoscale. Discuss. 10M  
b) Explain the concept of biofunctionalized nanoparticles for surface enhanced Raman Scattering and Surface Plasmon Resonance. 10M
- Q.4 a) Write a note on synthesis of gold nanoparticles and their applications. 10M  
b) What are nanotubes? Discuss their application as an antibacterial agent. 10M
- Q.5 a) Describe the Applications and Risks of Nanomaterials Used in Regenerative Medicine 10M  
b) Write a note on DNA based nanopore sensing. 10M
- Q.6 a) Classify nanomaterials on the basis of dimensions. 10M  
b) Write a note on Toxicity and Environmental Risks of Nanomaterial 10M

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