

**Assignment No. : 05****(Module 5: Nanomaterials)**

<b>Subject</b>	<b>Physics</b>	<b>Subject Code</b>	<b>UBS1008</b>
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**SHORT QUESTIONS**

1. Explain the terms nanoscience and nanomaterials?
2. Define the term nanotechnology. Explain the role of nanotechnology in modern lifestyle.
3. Give two medical applications of nanomaterials.
4. Write any two allotropes of carbon.
5. Explain the term SEM and its applications.
6. Explain the term TEM and its applications.
7. Discuss any four differences between SEM and TEM.

**LONG QUESTIONS**

8. Explain nanomaterials? Discuss their classification and applications.
9. Write any five important properties of Nanomaterials.
10. Using the concept of density of states in different dimensions explain the terms Quantum well, Quantum wire, and Quantum dots with their properties.
11. What are Carbon nanotubes? Explain their properties and applications in brief.
12. “Graphene is an important allotrope of carbon.” Explain with its properties and applications in brief.
13. Using the concept of density of states in different dimensions explain 0D, 1D, 2D and 3D nanomaterials with their proper examples.