Q.No	Question	Marks
1	Define nanomaterials and state their size range.	2
2	What is nanochemistry?	2
3	List any two reasons why nanomaterials have superior properties compared to bulk materials.	2
4	Differentiate between top-down and bottom-up synthesis approaches.	2
5	Name any two methods used for the synthesis of nanomaterials.	2
6	What is meant by surface plasmon resonance?	2
7	Mention one mechanical and one optical property of nanomaterials.	2
8	Name two main forms of carbon showing polymorphism.	2
9	Who discovered carbon nanotubes and in which year?	2
10	Mention one application of nanotechnology in medicine.	2

Q.No	Question	Marks
1	Explain the Sol-Gel method for the synthesis of nanomaterials with chemical reactions involved.	5
2	Differentiate between diamond and graphite in terms of structure, hybridization, and properties.	5
3	Describe the Chemical Vapour Deposition (CVD) process with an example.	5
4	Explain the optical properties of nanomaterials with reference to surface plasmon resonance.	5
6	Explain the hydrothermal synthesis of nanomaterials.	5
7	Discuss the electronic properties of nanomaterials and their dependence on quantum effects.	5
8	Explain how carbon nanotubes are used for targeted drug delivery.	5
9	What are Carbon Quantum Dots (CQDs)? Explain their use in biomedical imaging.	5