

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP2025)

CLASS: IMSc
BRANCH: CHEMISTRY

SEMESTER : VI
SESSION : SP/2025

SUBJECT: CH316 NOVEL INORGANIC SOLIDS

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

		CO	BL
Q.1(a)	What are the effects of alloying elements on steel properties?	[2] 1	1
Q.1(b)	Explain with diagram the various phase transformation of Austenite on controlled cooling.	[3] 1	2
Q.2(a)	Differentiate between annealing and normalizing.	[2] 1	2
Q.2(b)	Draw and explain Fe- C phase diagram.	[3] 1	3
Q.3(a)	Discuss about some important properties of silver nanoparticles.	[2] 3	2
Q.3(b)	Discuss classification of nanomaterials based on their pore dimensions	[3] 3	3
Q.4(a)	What do you mean by SWCNT and MWCNT?	[2] 3	1
Q.4(b)	Discuss the properties of bionanomaterials.	[3] 3	3
Q.5(a)	What is wrought iron?	[2] 4	2
Q.5(b)	Define the term: Elasticity, Plasticity, Creep	[3] 4	3

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