

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION SP2023)

CLASS: IMSc  
BRANCH: CHEMISTRY

SEMESTER : VI  
SESSION : SP2023

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
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		CO	BL
Q.1(a)	Compare and contrast annealing and normalizing.	[2] 1	3
Q.1(b)	Explain the phase diagram of Fe alloy.	[3] 1	2
Q.2(a)	Discuss the mechanism involved in tempering.	[2] 1	2
Q.2(b)	What is cold working? Discuss the phase transformation on controlled cooling of Austenite phase.	[3] 1	3
Q.3(a)	What is creep and fatigue?	[2] 2	1
Q.3(b)	What is the difference between cast iron and wrought iron?	[3] 2	3
Q.4(a)	What do you mean by valve steels? Give example	[2] 2	2
Q.4(b)	Write short notes on phosphor bronze.	[3] 2	1
Q.5(a)	What are whiskers?	[2] 3	2
Q.5(b)	Discuss why glass is popular as a fiber reinforcement materials.	[3] 3	4

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