

Roll No.

23397

**M. Tech. 1st Semester Civil Engg.
(Specialisation Structural Design)**

Examination – December, 2013

MATERIAL SCIENCE

Paper : MTSD-110

Time : Three Hours]

[M. M. : 100

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complain in this regard, will be entertained after examination.

Note : Attempt any *five* questions, each questions carry equal marks.

1. Define the material science. Explain in detail the classification, Important properties, requirements of

4. Write short note on the following :
- (1) General structure of ceramic material. 10
 - (2) Properties of ceramics. 10
5. Explain in detail the iron carbon diagram and T.T.T. diagram. 20
6. (a) What are different types of composite material ? 10
- (b) What are different properties of plastic ? 10
7. (a) What is Hydration mechanism in cement and concrete ? 10
- (b) What are different properties of concrete ? 10
8. Write short notes on the following :
- (1) Corrosion and oxidation. 10
 - (2) Performance under high temp. 10
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