Roll No.

23376

M. Tech. 1st Sem. (Civil Engg.) Specialisation in Structual Engg. Examination – December, 2013

MATERIAL TECHNOLOGY

Paper: CE-601/MTSD-101

Time: Three hours [Maximum Marks: 100

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

Note: Attempt any five questions.

- **1.** Explain chemical composition of cement & also explain the different types of cement 20
- **2.** Explain in detail, factors affecting the strength of Concrete.
- **3.** Draw & explain the stress-strain curve behavior of mild steel in simple tension.
- **4.** Define the durability of concrete & also explain the effects of air-entrained in concrete.

- **5.** (i) Explain the tests for determining the workability of concrete.
 - (ii) Define Fibre Reinforced Concrete. 10
- **6.** Explain in detail, all the factors influencing the fatigue strength.
- 7. Define the effect of temperature on concrete and also explain high temperature properties. 20
- **8.** Define creep of concrete & also explain its mechanics in tension.