

Roll No.

23376

**M.Tech 1st Semester Civil Engg.
(Specialization in Structural
Engineering) Examination–
May, 2014**

MATERIAL TECHNOLOGY

Paper CE-601/MTSD-101

Time : 3 hours

Max. 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 the examination.

Note : Attempt any **five** questions.

1. Explain the different types of cement and also define the factors affecting the strength of concrete. 20

2. (i) Define the durability and permeability of concrete. 10
(ii) Explain the properties of fresh concrete. 10

23376-250-(P-2)(Q-8)(14)

(1)

[Turn Over

3. Explain in detail, all mechanical tests for hardened concrete. 20
 4. Define fibre reinforced concrete and also explain the properties of fresh steel-fibre reinforced concrete. 20
 5. Define, fatigue strength and also explain the factors influencing fatigue strength. 20
 6. Define endurance limit and also explain the nature of fatigue failure. 20
 7. Explain creep of conc. And also explain its creep-stress-time-temperature relationship. 20
 8. Explain how increase and decrease in temperature affects the properties of concrete and also explain the thermal properties of concrete. 20
-