

Roll No. :

Total No. of Questions : 8] [Total No. of Pages : 2

23376

M.Tech. 1st Semester Civil Engg.
(Spl. in Structural Engg.)
Examination, March-2021

MATERIAL TECHNOLOGY

Paper-CE601/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. All questions carry equal marks.

1. Explain the different types of Cement. What are the factors affecting the strength of cement? 20
2. What do you mean by Hydration of Cement ? Explain its structure and water held in hydrated cement paste. 20

3. Explain the stress-strain curve for mild steel in simple tension. 20
4. Write the procedure for mechanical test of hardened concrete. 20
5. Explain the fatigue strength for completely reversed stresses. 20
6. Explain in detail the nature of Fatigue Failure. 20
7. Drive the relation among the creep-stress-time—temperature relations for simple tension. 20
8. Explain the Deformation of Crystals and theory of Dislocations. 20