Roll No. | | | | | | | | | | | | | **Total No. of Pages : 01**

Total No. of Questions : 08

M.Tech. Civil Engg. (2016 Onwards EL-I) (Sem.–2)

ENGINEERING ROCK MECHANICS

Subject Code : MTCE-213

M.Code : 74306

Date of Examination : 17-12-22

Time : 3 Hrs. **Max. Marks : 100**

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

1. a) Differentiate between engineering geology and rock mechanics.

   b) Explain the various geological factors affecting rocks.

2. Write in detail about discontinuities, deformability and strength of rock masses.

3. Write short notes on : a) Subsiding and swelling Rocks

   b) Stress-Strain behavior in Compression

4. a) What do you understand by anisotropy and homogeneity in rocks.

   b) Explain stereonet analysis.

5. a) Explain problematic rocks in detail.

   b) Discuss modern modelling techniques & analysis in rocks.

6. a) Write in detail about in situ stresses and their measurements in rocks.

   b) What are different modes of failure for rock slopes?

7. Define Rock engineering. What are the different approaches to rock mechanics modelling for rock engineering design?

8. ‘‘Behaviour of rocks in time dependent’’. Discuss the factors responsible for time dependent behaviour of rocks. Explain in detail.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.