

Code: CE3T4

II B.Tech - I Semester – Regular Examinations - January 2014

**ENGINEERING GEOLOGY
(CIVIL ENGINEERING)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. Explain briefly about the role and functions of engineering geologist in planning, designing and construction stages of various civil engineering projects. 14 M
2. a) Give salient features and economic importance of feldspar group of minerals. 7 M
b) Write short notes on any Two:
 - i) Quartz and flint
 - ii) Muscovite and asbestos
 - iii) Hematite and bauxite 7 M
3. How are igneous rocks formed in nature? Give a brief account of classification of igneous rocks with suitable examples. 14 M
4. a) What is faulting? Describe the important types of faults with neat sketches on the basis of relative movement. 7 M

- b) Write short notes on any Two:
- i) Strike and dip of rock strata.
 - ii) Anticlinal valleys and synclinal hills.
 - iii) Stabilisation of soils. 7 M
5. a) What is mass-wasting? Explain the important methods to be adopted in the mitigation of landslide occurrences. 7 M
- b) What is an aquifer? Describe the ground water condition of wells that lies with unconfining and confining stratum. 7 M
6. What is seismic refraction? Discuss briefly about the method of seismic refraction for investigation of subsurface layers. 14 M
7. What is a multi-purpose dam? Give an account of various geological investigations to be considered in the selection of dam site. 14 M
8. Describe the different types of tunnels and their importance in public transportation and power utilities. 14 M