## 3E1623

**B.Tech. (Sem.III) (Main/Back) Examination, 2015**
**Civil Engineering**
**3CE3 Engineering Geology**

Time : 3 Hours

Total Marks : 80
Min. Passing Marks : 26

**Instructions to Candidates :**
Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

### UNIT - I

1. (a) Discuss about geological work by wind action and describe various features form by erosion and deposition. (8)
   (b) Discuss about various physical properties of mineral. (8)

**OR**

1. (a) Write short note on scope of Geology for Civil Engineers. (8)
   (b) Draw and describes Geological Time Scale. (8)

### UNIT – II

2. (a) Enumerate classification of Igneous Rocks. (8)
   (b) Describe various structures of Metamorphic Rocks. (8)

**OR**

2. (a) Describe classification of sedimentary rocks. (8)
   (b) Write short notes on any two :
       (i) Differentiate between porphyritic and poikilitic texture.
       (ii) Forms of igneous intrusive rocks
       (iii) Engineering properties of rocks. (8)

### UNIT – III

3. (a) Give an account of the classification of faults. (8)
   (b) Discuss the importance of faults at dam and tunnel sites. (8)

**OR**

3. A coal seam dip at the rate of 1in 10 direction S10°W. What will be the inclination of a road driven in direction S50°W. (16)

### UNIT – IV

4. Describe the geological investigation to be carried out at a tunnel site. Name any four important tunnels. (16)

**OR**

4. Discuss about "Electrical Resistivity Method" for geological investigation of any area. (16)

### UNIT – V

5. (a) What is remote sensing? (4)
   (b) How the remote sensing techniques can be useful in civil engineering projects? (12)

**OR**

5. Write short note on any two :
   (a) Aerial Photographs
   (b) Satellite Imageries
   (c) G.I.S. Application

(2×8=16)