B.E. (Civil Engineering) Semester Third (C.B.S.)

# Engineering Geology

P. Pages : 2 **KNT/KW/16/7210**

Time : Three Hours * 0 9 0 0 * Max. Marks : 80

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Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Assume suitable data whenever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

**1.** Give an account of the geological work of wind. Explain in detail important features of the landscape of wind erosion and deposition. **14**

**OR**

**2.** a) Describe the physiographic and tectonic divisions of India. **7**

b) What is stratigraphy ? Describe various principles of stratigraphic correlations. **7**

**3.** What is a mineral ? Describe different physical properties of minerals which help to identify them. **13**

**OR**

**4.** What are Igneous Rocks ? Discuss the formation of igneous rocks and tabular classification of igneous rocks. **13**

**5.** What are faults ? Discuss different types of faults and their significance in civil engineering construction work. **14**

**OR**

**6.** a) A limestone bed in a dam site is found to be dipping at 1 in 6 along S 65º W and 1 in 8 along S 15º E. Find the amount and direction of its true dip. scale 1 unit = 1 cm. **7**

b) A sandstone bed is exposed on a slope 20º East. The bed dips at 30º west and its outcrop is 160m wide. Determine its true and vertical thickness. Scale 1 cm = 40 m. **7**

**7.** What are Earthquakes ? Describe in brief the origin of an earthquakes and seismic zones of India. **13**

**OR**

**8.** What are landslides ? How are they caused ? Describe various methods of prevention of landslides. **13**

**9.** a) What is ground water ? Describe the occurrence of ground water below the earth's surface. **7**

b) Discuss that various hydrogeological conditions which are responsible for formation of water table well artesian well and flowing well. **6**

**OR**

**10.** What is geophysical prospecting ? Describe the electrical resistivity method of geophysical prospecting in detail. **13**

**11.** Discuss the geological conditions that influence the stability of a dam structure, with neat sketches. **13**

**OR**

**12.** Write short notes on : **13**

a) Building stones.

b) Rock Quality Designation. (R.Q.D.)

c) Railway ballasts.

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