

Roll No

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CE - 304

B.E. III Semester

Examination, December 2013

Engineering Geology

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt five questions in all. Selecting one from each unit.
ii) Draw well labeled diagrams wherever necessary.

Unit - I

1. a) Discuss role of geologist in civil engineering.
b) Write explanatory notes on any two of the following:
 - i) Weathering and Erosion
 - ii) Soil Profile
 - iii) Crust of the earth
 - iv) Water falls

OR

2. a) Discuss the geological work of a River.
b) Write explanatory notes on any two of the following:
 - i) Earthquake waves
 - ii) The Mantle
 - iii) Cone and Crater
 - iv) River meandering significant in civil engineering
 - v) Pedestal rocks

Unit - II

3. Describe the following minerals giving their physical properties, chemical composition and uses: (Any four)

- | | |
|-------------|--------------|
| i) Galence | ii) Calcite |
| iii) Quartz | iv) Hematite |
| v) Gypsum | vi) Graphite |

OR

4. Write notes on the following (any four) :

- i) Cubic system
- ii) Mohr's scale of Hardness
- iii) Difference between cleavage and fracture
- iv) Form and Habit of minerals
- v) Elements of Crystal symmetry.

Unit - III

5. What are sedimentary rocks? Give an account of their formation, Texture and Structures.

OR

Write explanatory notes on the following (any four):

- i) Tabular classification of Igneous rocks
- ii) Metamorphic zones
- iii) Geologic Time Scale
- iv) Gondwana super group
- v) Engineering properties of rocks.

OR

6. Discuss the classification of Metamorphic rocks and importance of such rocks in civil engineering construction.

OR

Write notes on the following (any four):

- i) Physiographic features of India.
- ii) Structures of Igneous rocks
- iii) Conglomerates and Breccia
- iv) Schist and Gneiss
- v) Contact metamorphism

Unit - IV

7. Explain with neat sketches principle types of FAULTS as recognised on the basis of

- i) Mode of occurrence
- ii) Appearance of movement

Discuss their importance in civil engineering.

OR

8. Write explanatory notes on the following (any four):

- i) Dip and strike of the strata and their importance in civil engineering.
- ii) Types of unconformity
- iii) Recumbent and overturned folds
- iv) Anticlines and synclines
- v) Outliers and Inliers.

Unit - V

9. Give the definition and classification of Landslides. Explain how landslides can be prevented.

OR

10. Write explanatory notes on the following (any two):

- i) Construction of dams on unconsolidated rocks.
- ii) Prevention of engineering structures from seismic shocks
- iii) Role of geology in selection of sites for Dams or Reservoirs.
