

# CBCS SCHEME

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17CV/CT35

## Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Engineering Geology

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### Module-1

- 1 a. Describe the role of geology in the Civil Engineering Projects. (06 Marks)
- b. With neat sketch, explain the different zones of the interior of the EARTH. (06 Marks)
- c. Define a mineral with examples. Describe the following physical properties of minerals :  
i) Lustre ii) Cleavage. (08 Marks)

OR

- 2 Describe how the physical properties are helpful in their identification of minerals in the field with examples. (20 Marks)

### Module-2

- 3 a. What are Rocks? Based on their origin, how the rocks have been classified and how are they formed with examples. (04 Marks)
- b. With the help of neat sketches, describe the forms of igneous rocks. (08 Marks)
- c. Describe any two rocks their geological properties and add their engineering uses :  
i) Granite ii) Sand stone iii) Marble. (08 Marks)

OR

- 4 What are folds? How are they caused? With neat sketch, mention the parts of the fold. Describe the different types of folds with figures. Also add a note on their civil engineering considerations. (20 Marks)

### Module-3

- 5 a. What is Weathering? Describe the mechanical and chemical weathering. (10 Marks)
- b. Give detailed account of geological work done by rivers. (10 Marks)

OR

- 6 a. What is an Earthquake? Describe the tectonic causes of earthquake and write note on the effects of earthquakes. (10 Marks)
- b. Write note on causes of landslides. (05 Marks)
- c. Write brief note on coastal land forms. (05 Marks)

### Module-4

- 7 a. Define Ground water. Describe the hydrological cycle. Explain the factors influencing the surface runoff and infiltration. (10 Marks)
- b. Discuss the ground water survey by Electrical Resistivity method, with a circuit diagram. (10 Marks)

OR

8 Write notes on :

- a. Water table and perched water table.
- b. Aquifer and its types.
- c. Specific yield and retention.
- d. Porosity and Permeability.

(20 Marks)

**Module-5**

- 9 a. What is Remote Sensing? Write its application in Civil Engineering. (08 Marks)
- b. What is Geographical Information System? Name the different components of Geographical Information System. (06 Marks)
- c. Write a note on Application of Global Positioning System (GPS) in Civil Engineering. (06 Marks)

OR

10 Write a note on :

- a. Impact of Mining, Quarring on Environment.
- b. Natural disasters and their mitigation.

(10 Marks)

(10 Marks)

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