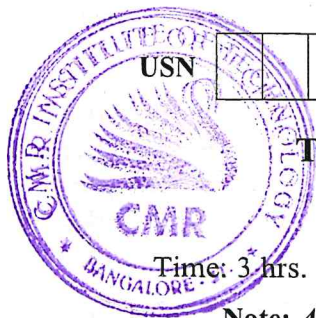


# CBCS SCHEME

17CV35



## Third Semester B.E. Degree Examination, Jan./Feb.2021 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. What is geology? Explain the importance of geology in the field of civil engineering. (06 Marks)
- b. With a neat sketch, explain in detail the internal structure of the earth. (08 Marks)
- c. Define a mineral. Explain briefly (i) Rock forming mineral and (ii) Ore forming mineral with example. (06 Marks)

OR

- 2 a. Mention the different physical properties of a mineral which are helpful in their identification and briefly explain any three of them with example. (12 Marks)
- b. Write the physical properties, chemical composition and uses of any two of the following minerals:  
(i) Quartz (ii) Calcite (iii) Magnetite (iv) Bauxite (08 Marks)

### Module-2

- 3 a. What are Igneous Rocks? Explain the classification of Igneous Rocks based on the mode of origin with examples. (06 Marks)
- b. Explain briefly the different forms of Igneous bodies with neat sketches. (08 Marks)
- c. What are folds and faults? Briefly explain the different parts of a fold and fault. (06 Marks)

OR

- 4 a. Describe in detail the primary sedimentary structures with sketches. (08 Marks)
- b. What is metamorphism? Explain the different types of metamorphism. (08 Marks)
- c. With a neat sketch, explain briefly (i) Columnar joints (ii) Mural joints. (04 Marks)

### Module-3

- 5 a. Define weathering. Briefly explain the different types of weathering and add a note on its importance. (08 Marks)
- b. Explain the Geomorphological aspects in the selection of site for a Dam. (06 Marks)
- c. Describe the different drainage patterns of a river basin with diagrams. (06 Marks)

OR

- 6 a. What is an earthquake? Write a brief note on earthquake resistant structure. (08 Marks)
- b. What are landslides? Mention the factors responsible for landslides and add a note on its preventive measures. (06 Marks)
- c. Write short notes on: (i) Tsunami (ii) Coastal land forms. (06 Marks)

### Module-4

- 7 a. Define hydrology. Explain briefly hydrological cycle. (06 Marks)
- b. What are Aquifers? Explain in detail the various types of aquifers with sketches. (08 Marks)
- c. Explain with a neat sketch the vertical distribution of ground water. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Enumerate the ground water exploration by Electrical Resistivity method. (10 Marks)  
b. What is Artificial Recharge of ground water? Explain the different methods of ground water recharge. (06 Marks)  
c. Define the terms : (i) Porosity and (ii) Permeability. (04 Marks)

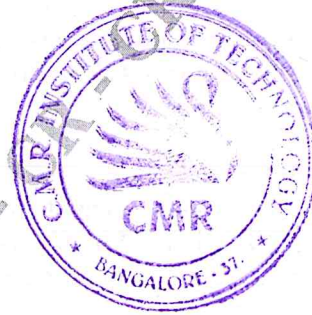
Module-5

- 9 a. What is Remote Sensing? Discuss its applications in civil engineering. (10 Marks)  
b. What is GIS? What are its applications in civil engineering? (05 Marks)  
c. What is GPS? What are its applications in civil engineering? (05 Marks)

OR

10 Write short notes on :

- a. Impact of mining on environment  
b. Impact of reservoir on environment  
c. LANDSAT imageries  
d. Topographic and contour maps.



(20 Marks)

\*\*\*\*\*