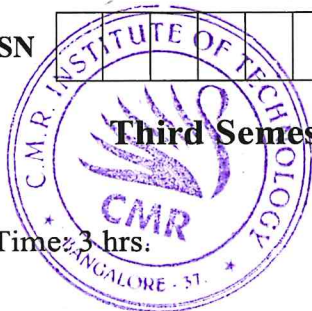


CBCS SCHEME

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15CV35



Third Semester B.E. Degree Examination, July/August 2021

Engineering Geology

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions.

- 1 a. Describe earth's interior. Give details of discontinuities which mark the interface separating the different layers of varying densities. (08 Marks)
b. Write the physical properties of any two of the following minerals. Add a note on their use.
i) Orthoclase feldspar ii) Biotite mica iii) Chalcopysite iv) Calcite. (08 Marks)
- 2 a. Justify how geology has to be of paramount importance in different civil engineering structures. (08 Marks)
b. Define mineral. How are they classified? Add a note on streak and hardness. (08 Marks)
- 3 Write a note on:
a. What are joints? Write a note on their significance in reservoir site.
b. Granite is a better engineering material justify by giving example.
c. Discuss classification of igneous rocks
d. Factors of metamorphism. (16 Marks)
- 4 a. Describe in brief, the mode of formation of sedimentary rocks. Write various sedimentary structures. (08 Marks)
b. What is a fold? Describe the types of fold with neat sketches. (08 Marks)
- 5 Critically examine the following:
a. Water tight reservoir basin of adequate capacity and rate of accumulation of silt should not exceed beyond the permissible limit. (04 Marks)
b. River does not excavate its valley below MSL-Justify. (04 Marks)
c. Water is always the cause and drainage the only cure of landslide-Justify. (04 Marks)
d. A narrow gorge with enough catchment area is not suitable as a dam and reservoir. (04 Marks)
- 6 a. What are earthquakes? Add a note a seismic belt and shield area. (08 Marks)
b. Discuss briefly the sequence of slopes (zones) from the shore to the sea floor. (04 Marks)
c. Write a note on seismic resistant structure. (04 Marks)
- 7 a. What is aquifer? Describe the types of aquifer with a neat sketch. (08 Marks)
b. Discuss various artificial recharge methods of ground water. (08 Marks)
- 8 a. Discuss in brief the ground water investigation by geological method. Add a note on water witching. (08 Marks)
b. Describe the fluctuation of water table. Add a note on cone of depression. (08 Marks)
- 9 a. What is remote sensing? Write its application in civil engineering. (06 Marks)
b. Explain impact of quarrying and mining on environment. (04 Marks)
c. What are natural disasters? Add a note on mitigation strategy to be applied during disasters. (06 Marks)
- 10 a. Write the Applications of Geographical Information System (GIS). (06 Marks)
b. Write a brief note on impact of reservoir on environment. (06 Marks)
c. Explain use of topographic map in civil engineering. (04 Marks)

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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.