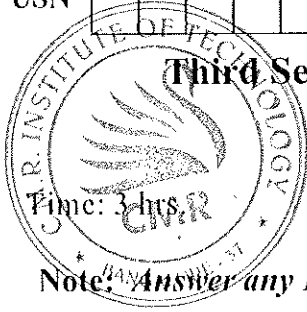


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10CV36



Third Semester B.E. Degree Examination, June/July 2016

Applied Engineering Geology

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1
 - a. Discuss in brief, the different branches of geology which are related to civil engineering. (10 Marks)
 - b. Write the chemical composition, crystal system and uses of any two of the following minerals – Agate, Orthoclase feldspar, Talc, Calcite. (05 Marks)
 - c. Discuss in brief, the different discontinuities traced within the earth's interior. (05 Marks)
- 2
 - a. Write the forms of igneous bodies with neat sketches. (10 Marks)
 - b. Write the role of metamorphic agents in metamorphism. (06 Marks)
 - c. Write a brief note on Exogenous and Endogenous geological agents. (04 Marks)
- 3
 - a. Write a brief note on soil profile. Discuss the factors which contribute for the formation of soil. (08 Marks)
 - b. Discuss Meanders and Oxbow lake, with neat sketches. (06 Marks)
 - c. What is Unconformity? What is its significance in civil engineering? (06 Marks)
- 4
 - a. What is an Earthquake? Discuss the preventive measures to be taken during construction of building in seismic zones? (08 Marks)
 - b. Discuss the different seismic zones of India. (06 Marks)
 - c. Explain the causes and effects of an Earthquake. (06 Marks)

PART – B

- 5
 - a. What are the qualities that are required for the selection of rocks as construction materials? (08 Marks)
 - b. Define Fault. How are they formed and their effects in civil engineering? (08 Marks)
 - c. Write a brief note on Joints in rocks and their significance in a reservoir site. (04 Marks)
- 6 Critically examine the following with suitable reason :
 - a. Sedimentary rock dipping downstream are ideal for dam sites.
 - b. Reservoir along the course of effluent streams are better than those on the valleys of influent rivers. Justify.
 - c. Stability of a tunnel alignment along a seismic zone.
 - d. Silting up of reservoir is a good sign for the safety of the dam. (20 Marks)
- 7
 - a. Write a brief note on water dousing or superstitious method of finding water. (04 Marks)
 - b. What is an Aquifer? Write a note on confined and unconfined aquifer, with a neat sketch. (08 Marks)
 - c. What is Rain water harvesting? Discuss the various types of artificial recharge. (08 Marks)
- 8
 - a. What is Remote Sensing? Discuss its applications in civil engineering. (08 Marks)
 - b. Write a note on impact of mining on environment. (06 Marks)
 - c. What is GIS? Write its use in civil engineering. (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.