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10CV36

Third Semester B.E. Degree Examination, Dec.2016/Jan.2017

Applied Engineering Geology

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. What is geology? Briefly explain its important branches. (06 Marks)
b. What is seismology? Explain with a neat sketch the different parts of internal structure of the earth. Add a note on seismic waves role in understanding the structure and composition of the earth. (14 Marks)
- 2 Explain in detail how the physical properties of minerals are helpful in their identification in the field. (20 Marks)
- 3 a. What are igneous rocks? Explain with sketches the concordant and discordant igneous intrusive bodies. (14 Marks)
b. What is texture? Explain with sketches equigranular and inequigranular textures. (06 Marks)
- 4 Explain the following:
a. Epigene and hypogene geological agents
b. Preventive measures of landslides
c. Soil profile with a neat sketch.
d. Importance of weathering of rocks (20 Marks)

PART – B

- 5 Explain the following with neat sketches:
a. Horst and Graben structure
b. Compass clinometers and its uses
c. Denudational effects of anticlines and synclines
d. Angular unconformity and disconformity (20 Marks)
- 6 What is a DAM? With what purpose it will be constructed? Explain in detail the geological investigations of a good dam site. (20 Marks)
- 7 a. Write a note on hydrological cycle. (05 Marks)
b. What is an aquifer? Explain in detail the vertical distribution of ground water. (10 Marks)
c. Write a note on artificial recharge of ground water in rainwater harvesting. (05 Marks)
- 8 a. Explain the application of remote sensing in civil engineering practices. (08 Marks)
b. Discuss the impact of mining on geoenvironment. (06 Marks)
c. Write a note on porosity and permeability of different rocks. (06 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.