

--	--	--	--	--	--	--	--	--	--

**Third Semester B.E. Degree Examination, June/July 2015**  
**Applied Engineering Geology**

Time: 3 hrs.

Max. Marks:100

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

**PART – A**

- 1 a. Discuss the importance of geology in the field of civil engineering. (06 Marks)  
b. With neat figure, describe the internal structure of the earth. (06 Marks)  
c. Discuss any two of the following physical properties of minerals :  
i) Fracture    ii) Lustre    iii) streak. (04 Marks)  
d. Write physical properties chemical composition and uses of any two of the following :  
i) Quartz    ii) Calcite    iii) Galena. (04 Marks)
- 2 a. What are igneous rocks? Describe the mode of occurrence of igneous rocks. (08 Marks)  
b. Describe the primary structure of sedimentary rocks. (06 Marks)  
c. What is metamorphism? Describe any four types of metamorphism. (06 Marks)
- 3 a. Define soil. Discuss the erosion and conservation of soil. (08 Marks)  
b. Discuss the mechanical weathering of rocks. (06 Marks)  
c. Explain Epigene and Hypogene geological agents. (04 Marks)  
d. Define waterfall. (02 Marks)
- 4 a. What is earthquake? Discuss the causes of earthquake. (08 Marks)  
b. Explain the Remedial measure of landslide. (05 Marks)  
c. Explain continental shelf, continental slope. (04 Marks)  
d. Explain with neat diagram, the Mid oceanic ridge. (03 Marks)

**PART – B**

- 5 Explain the following :  
a. Importance of joints in civil engineering  
b. Normal fault and reverse fault  
c. Unconformity  
d. Anticlinal and synclinal fold. (20 Marks)
- 6 a. Define dam? Discuss the geological consideration in selecting a suitable site for dam construction. (12 Marks)  
b. Discuss tunneling in anticlinal folded rocks. (04 Marks)  
c. Explain silting of reservoir and its control. (04 Marks)
- 7 a. Explain the electrical resistivity method for ground water exploration. (08 Marks)  
b. Write a note on artificial recharges of ground water. (05 Marks)  
c. Write a note on confined and unconfined aquifers. (04 Marks)  
d. Write a note on hydrological cycle. (03 Marks)
- 8 Explain the following :  
a. Application of remote sensing in civil engineering  
b. Impact of mining on environment  
c. Application of GIS and GPS in civil engineering  
d. Quality of ground water in different terrain. (20 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.