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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech II Year II Semester Supplementary Examinations February 2022

ENGINEERING GEOLOGY

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Define geology and explain different branches of geology? 6M
 b Explain the scope and importance of geology in civil engineering works. 6M

OR

- 2 a What are the types of geological agents? Describe briefly the natural agencies. 6M
 b Explain in detail the role of temperature in mechanical weathering of rocks. 6M

UNIT-II

- 3 a Define mineral and explain the various physical properties of minerals? 6M
 b Write physical properties of Garnet and Hematite minerals. 6M

OR

- 4 a Describe any two important rock forming minerals from the civil engineering point of you. 6M
 b Describe the physical properties which depend on light. 6M

UNIT-III

- 5 a What is metamorphism? Discuss the various agents of metamorphism? 6M
 b Why heat is considered the most important agent of metamorphism? 6M

OR

- 6 a Write short notes on 6M
 a. Structures of igneous rocks b. Structures of metamorphic rocks
 b In what way the granite, limestone and marble are used on the basis of their civil engineering applications? Add their mechanical properties. 6M

UNIT-IV

- 7 a What is an Unconformity? Describe different types of unconformities. Add a note on the Importance of unconformity 6M
 b Differentiate between true dip and apparent dip of rock formation. 6M

OR

- 8 a Evaluate the seismic refraction survey to be conducted for determining the depth to bed rock. 6M
 b Discuss in detail about the electrical method of investigations for ground water exploration. 6M

UNIT-V

- 9 a What is a water table? What are types of ground water? Which occur in the zone of aeration and saturation? 6M
 b Explain the engineering significance of ground water. 6M
- 10 a List out the factors contributing to the success of a reservoir? 6M
 b Describe the geology of the Nagarjuna Sagar dam site in Andhra Pradesh. 6M

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