

**Reg. No:**

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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)  
**B.Tech III Year I Semester Supplementary Examinations November-2020**  
**ENGINEERING GEOLOGY**  
(Civil Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Explain the significance of geological studies to solve civil engineering problems. 7M  
b What are the various processes acting on the surface of the earth? Explain. 5M

**OR**

- 2 a Enlist and explain the various geological activities of wind. 6M  
b Write briefly on weathering process. 6M

**UNIT-II**

- 3 a Describe the physical properties which depend on light. 6M  
b Give the chemical composition, occurrence and engineering behavior of the clay minerals. 6M

**OR**

- 4 a Explain the physical properties for the following minerals groups 6M  
i) Garnet ii) Mica  
b Describe any two important rock forming minerals from the civil engineering point of view. 6M

**UNIT-III**

- 5 a Enlist and explain the structures of the sedimentary rocks with neat sketches. 6M  
b Explain the metamorphic processes in detail. 6M

**OR**

- 6 a Enlist and explain the various igneous forms. 4M  
b Describe the granitic rock with reference to civil engineering importance. 8M

**UNIT-IV**

- 7 a What are landslides? Explain the causes and methods to be adopted to control them. 8M  
b Write briefly on magnitude of earthquake. 4M

**OR**

- 8 a Explain the classification of folds with neat sketches. 6M  
b Describe the various parts of the faults with neat sketches. 6M

**UNIT-V**

- 9 a Describe the various parts of the dams and classification of the dams. 6M  
b Explain the sliding, uplift and elastic rebound problems at a dam site. 6M

**OR**

- 10 a What is a tunnel? Explain the terminology applied in tunnel with neat sketch. 6M  
b Explain the geological investigations required for the selection of tunnel alignment. 6M

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