

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech II Year II Semester Regular & Supplementary Examinations August-2023**  
**ENGINEERING GEOLOGY**  
(Civil Engineering)

**Time: 3 Hours****Max. Marks: 60**

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

**UNIT-I**

- 1 a What is weathering? Enumerate the various mechanisms of rock weathering. CO1 L2 6M  
b Distinguish between weathering and erosion. CO1 L4 6M

**OR**

- 2 a Discuss the application of engineering geology in civil engineering projects. CO1 L3 6M  
b Explain how mechanical and chemical weathering of rocks makes them unsafe for civil engineering construction. CO1 L5 6M

**UNIT-II**

- 3 a What are secondary minerals? How are formed? Add a note on their significance in rocks? CO2 L2 6M  
b Name at least four clay minerals and their important engineering properties. CO2 L4 6M

**OR**

- 4 a Describe any two important rock forming minerals from the civil engineering point of you. CO2 L3 6M  
b Describe the physical properties which depend on light. CO2 L4 6M

**UNIT-III**

- 5 a What is metamorphism? Discuss the various agents of metamorphism. CO3 L1 6M  
b Why heat is considered the most important agent of metamorphism? CO3 L3 6M

**OR**

- 6 a Describe the origin, texture, structure and occurrence of pegmatite, sandstone, basalt. CO3 L2 6M  
b Write an essay on engineering properties distribution and uses of granite. CO3 L3 6M

**UNIT-IV**

- 7 a Discuss in detail about the electrical method of investigations for ground water exploration? CO4 L2 6M  
b How geological investigations are conducted for subsurface investigations using magnetic methods. CO4 L3 6M

**OR**

- 8 a What is a monocline? How is an isoclinal fold different from a monocline? CO4 L1 6M  
b What is a fold? Describe with the help of well labeled neat sketches & different parts of fold. CO4 L4 6M

**UNIT-V**

- 9 a Write short notes on: CO5 L2 6M  
i) Types of aquifers ii) Types of springs iii) Cone of depression  
b Explain various investigation uses in groundwater exploration. CO5 L2 6M

**OR**

- 10 a What are dams and reservoirs? Explain the purpose of construction of major dams and reservoirs in India. CO5 L2 6M  
b Explain the geological structural controls on selection of dam site. CO5 L2 6M

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