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

B.Tech II Year II Semester Regular Examinations July-2021

ENGINEERING GEOLOGY

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Describe the various process of weathering. L2 6M
b How do civil engineers determine the extent of weathering pattern in major civil engineering constructions? L6 6M

OR

- 2 a Discuss the scope of application of geological knowledge in the planning work. L2 6M
b Describe chemical weathering in detail. L2 6M

UNIT-II

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

OR

- 4 a Write about feldspar group. L6 6M
b Differentiate between Muscovite and Biotite Mica. L4 6M

UNIT-III

- 5 a Explain the structures and textures of sedimentary rocks. L2 6M
b What are the clastic rocks? L3 6M

OR

- 6 a How would you differentiate between igneous rock, metamorphic rock and sedimentary rock on the basis of structure and texture? L4 6M
b Write a case study about rocks and mineral resource of any geological conditions in India. L2 6M

UNIT-IV

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

OR

- 8 a Explain in detail about resistivity methods and wenner configuration. Add a note on its civil engineering applications. L2 6M
b Describe different geophysical methods in terms of principal, parameters, methods, equipment and applications of Gravity methods, Magnetic methods? L3 6M

UNIT-V

- 9 a Write short notes on: L2 6M
i) Types of aquifers ii) Types of springs iii) Cone of depression
b Explain various investigation uses in groundwater exploration. L2 6M
- OR**
- 10 a How the geological structures are responsible for the failure of any tunnel alignment. L3 6M
b Explain the sliding uplift and elastic rebound problems at a dam site. L2 6M

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