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

B.Tech II Year II Semester Supplementary Examinations March 2021

ENGINEERING GEOLOGY

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

PART-A

(Answer all the Questions 5 x 2 = 10 Marks)

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|---|---|---|----|
| 1 | a | Discuss different kinds of weathering. | 2M |
| | b | Describe the cleavage of minerals. | 2M |
| | c | Differentiate dyke and sills. | 2M |
| | d | Define dip and strike. | 2M |
| | e | What are seismic waves? How they are generated? | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|---|---|--|----|
| 2 | a | Explain the brief study of case histories of failure of some civil engineering constructions due to some geological drawbacks. | 5M |
| | b | Distinguish between weathering and erosion. Describe the various process of weathering. | 5M |

OR

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|---|---|---|----|
| 3 | a | How is Geology related to Engineering? Discuss the scope of application of geological knowledge in the planning work. | 5M |
| | b | Explain the process of weathering of common rock like Granite. | 5M |

UNIT-II

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|---|---|---|----|
| 4 | a | Name at least four clay minerals and their important engineering properties. | 5M |
| | b | What is a rock forming mineral? Discuss process of formation of minerals in nature. | 5M |

OR

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|---|---|---|----|
| 5 | a | Describe in detail the physical properties of minerals. Add note on the feldspar group of minerals. | 5M |
| | b | What are secondary minerals? Add a note on their significance in rocks. | 5M |

UNIT-III

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|---|---|--|----|
| 6 | a | Define term "rock" Describe the classification of rocks & their characteristics. | 5M |
| | b | Describe the columnar, flow and sheet structures of igneous rocks. | 5M |

OR

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|---|---|--|----|
| 7 | a | Explain the classification of sedimentary rocks giving suitable example. | 6M |
| | b | Describe the following rocks.
a) Granite b) Pegmatite | 4M |

UNIT-IV

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|---|---|--|----|
| 8 | a | What is an Unconformity? Describe different types of unconformities. Add a note on the Importance of unconformity. | 6M |
| | b | Define ground water. Write an essay on origin and distribution of ground water. | 4M |

OR

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|---|---|---|----|
| 9 | a | Classify and describe the different types of faults? Discuss the effects of faulting on various engineering projects. | 5M |
| | b | Explain various investigation uses in groundwater exploration. | 5M |

UNIT-V

- 10 a Describe the various effects of an earthquake. How do we locate the epicenter of an earth quake? 5M
 - b Explain the geological structural controls on selection of dam site. 5M
- OR**
- 11 a What are the various geological factors to be considered for the construction of tunnels? 5M
 - b Explain the methods to control reservoir silting. 5M

END