

B

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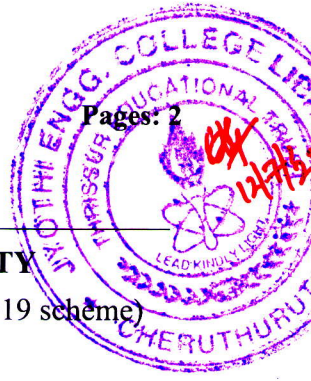
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Reg No.: _____

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S4 (R, S) / S2 (PT) (R, S) Examination June 2023 (2019 scheme)



Course Code: CET202

Course Name: ENGINEERING GEOLOGY

Max. Marks: 100

Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks)

		Marks
1	Explain any three significances of geology in civil engineering	3
2	Differentiate between longshore current and rip current.	3
3	Compare and contrast intensity and magnitude of an earthquake	3
4	Differentiate Moho and Guttenberg discontinuities	3
5	Using diagnostic physical properties how do you differentiate quartz and calcite	3
6	Compare the suitability of shale and sandstone as construction material	3
7	Differentiate an aquifer and an aquiclude	3
8	Explain Darcy's law	3
9	Draw a neat sketch of a normal fault and show hanging wall and foot wall	3
10	Differentiate fault and joint.	3

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

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|----|---|---|
| 11 | a) Explain different mechanism of physical weathering | 9 |
| | b) What are the engineering significances of weathering | 5 |
| 12 | a) What are the various causes of landslides | 9 |
| | b) Describe any five erosional landforms produced by rivers | 5 |

Module -2

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|----|--|---|
| 13 | a) Explain the different seismic zones in India | 5 |
| | b) Explain the various effects of earthquake | 9 |
| 14 | a) With the help of neat sketch explain the interior of the earth | 8 |
| | b) Compare seismic activity along different types of lithospheric plate boundaries | 6 |

Module -3

- 15 a) Describe the vertical distribution of groundwater 8
b) Describe the different methods to control groundwater at construction sites 6
16 a) Explain how resistivity survey is used in ground water exploration 9
b) Derive Ghyben-Herzberg equation 5

Module -4

- 17 a) Explain the different physical properties of minerals that affect the strength of a rock 8
b) River sand is dominated by quartz. Evaluate the various reasons for this 6
18 a) Discuss the suitability of granite and marble as flooring slab in areas exposed to rains. Justify your answer 7
b) Using structures in the rock how do you differentiate sedimentary rocks from the rest 7

Module -5

- 19 a) Explain the geologic considerations in the construction of a tunnel 7
b) What are the various structural criteria in selecting an ideal site for dam construction 7
20 a) Describe any five types of faults 10
b) Describe the different parts of a fold 4
