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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Fourth Semester B.Tech Degree Examination June 2022 (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 the relevance of Geology in Civil Engineering.	3
2	Describe the important types of physical weathering.	3
3	Write a note on the seismic belts of the world in relation to earthquakes.	3
4	Explain seismic safety factor.	3
5	Describe the vertical distribution of groundwater with the help of a neat diagram.	3
6	Give an account of the significance of Ghyben-Herzerg relation.	3
7	Enumerate the chemical composition and physical properties of Biotite and Calcite.	3
8	Describe the rock cycle with the help of a neat diagram.	3
9	Explain the engineering significance of faults.	3
10	Differentiate between Clinometer compass and Brunton compass.	3

PART B

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

Module -1

11	a) Describe a typical soil profile with the help of a neat diagram.	5
	b) Give an account of soil erosion and soil conservation measures.	9
12	What are landslides? Discuss the types, causes and controlling measures of landslides.	14

Module -2

13	a) Discuss the theory of origin of earthquakes with suitable illustrations.	5
	b) Give details on the types of earthquakes and measuring the size of an earthquake.	9

- 14 Describe the different types of seismic waves. With the help of a neat sketch explain the internal structure of the earth as revealed by the propagation of seismic waves. 14

Module -3

- 15 Explain Darcy's law and the properties of aquifers. Give an account of the different types of aquifers. 14
- 16 a) Discuss the problems created by groundwater to civil engineering structures and their control measures. 9
- b) Describe the electrical resistivity method of groundwater exploration. 5

Module -4

- 17 Give an account of the various physical properties of minerals examples which are helpful in their identification, with suitable examples. 14
- 18 a) Describe the chemical and mineralogical classification and important structures exhibited by igneous rocks. 10
- b) Write a note on the important rock types of Kerala. 4

Module -5

- 19 a) Describe the parts of a normal fault with the help of a neat sketch. 5
- b) Give an account of the common types of faults observed in the field. 9
- 20 Explain the geological considerations of site investigation for the construction of dams and reservoirs. 14
