



Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

B.Tech Degree S4 (S,FE) (FT/WP) (S2 PT) Examination December 2025/January 2026 (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  | Describe the nature of natural chemical solutions that interact with rocks in chemical weathering | 3 |
| 2  | Name any three types of erosion by sea waves and currents   | 3 |
| 3  | Explain the moment magnitude scale used for the rating of earthquakes                             | 3 |
| 4  | Explain the uses of Seismic Zonation Map of India   | 3 |
| 5  | Relate porosity of a rock to the movement of groundwater through it                               | 3 |
| 6  | State Darcy's Law   | 3 |
| 7  | Define triboluminescence of minerals with one example   | 3 |
| 8  | Describe the mineralogy of granite  | 3 |
| 9  | Explain dip and strike of rocks   | 3 |
| 10 | Classify the joints present in rocks  | 3 |

**PART B**

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

**Module -1**

- |    |  |   |
|----|--|---|
| 11 | a) Explain the processes responsible for the origin of laterite            | 9 |
|    | b) Relate rock weathering to any four points of engineering significance   | 5 |
| 12 | a) Explain the multiple roles played by water in the origin of landslides. | 7 |
|    | b) Illustrate any four types of engineering measures of soil conservation  | 7 |

**Module -2**

- |    |  |   |
|----|--|---|
| 13 | a) Demonstrate the use of propagation of seismic waves through the earth to reveal the interior of the earth | 7 |
|    | b) Relate plate tectonics to the origin of earthquakes   | 7 |
| 14 | a) Explain the importance of Richter scale in earthquake disasters management                                | 7 |
|    | b) Relate the rating of earthquakes to the destructions caused by the earthquakes                            | 7 |

**Module -3**

15 Relate the nature of the presence of groundwater at a given area to the different types of aquifers present in that area. 14

16 a) Enumerate and explain the different types of groundwater discharge 7

b) Explain one method to explore groundwater using the electrical resistivity of natural materials present beneath the surface of the earth 7

**Module -4**

17 a) Classify and characterize the rock types present in the coastal region of Kerala 7

b) Classify the igneous rocks based on the mineralogy of rocks 7

18 a) Compare and characterize any six types of lustres of minerals 8

b) How will you megascopically identify the basalt in the field 6

**Module -5**

19 a) Relate the presence of faults in rocks at a project site to the competence of that rocks to support load 7

b) Explain the parts of a fold with the help of a diagram 7

20 a) Explain the geological part of site investigation for the construction of a tunnel in a region 14

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