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08000CE205122007



Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S3 (S, FE) / S3 (PT) (S, FE) Examination December 2023 (2015 Scheme)

Course Code: CE205

Course Name: ENGINEERING GEOLOGY

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

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|---|-----------------------------------------------------------------------------|-----|
| 1 | a) Explain the significance of climate in physical weathering. | (6) |
| | b) Explain slake durability test to assess the intensity of weathering. | (9) |
| 2 | a) Elucidate on the vertical distribution of ground water. | (7) |
| | b) Examine hydraulic conductivity. | (8) |
| 3 | a) Assess the merits and demerits of weathering vis-à-vis a civil engineer. | (7) |
| | b) Evaluate the use of liners as methods to control groundwater. | (8) |

PART B

Answer any two full questions, each carries 15 marks.

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| 4 | a) The colour and streak of minerals are not always identical. Justify. | (8) |
| | b) Explain intensity and magnitude of earth quakes. | (7) |
| 5 | a) Describe the texture and mineralogy of shale and granite. | (8) |
| | b) Relate how schistosity in a rock affects its strength. | (7) |
| 6 | a) Compare and contrast P and S waves. | (7) |
| | b) Evaluate the properties (any four) desirable in rocks to be used as construction material of foundations. | (8) |

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PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Describe the geological factors to be considered during the construction of dams. (12)
- b) Explain: a. dip b. apparent dip c. strike d. rake (8)
- 8 a) Assess the implications of splash and rill erosion. (8)
- b) How does angle of repose and water content influence the occurrence of landslides? (12)
- 9 a) Discuss dip and thrust faults. (10)
- b) Describe the implications of crop rotation and bench terracing as soil conservation measures. (10)
