Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018
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

1 a) Give brief account of relevance of Geology in civil engineering.   (5)

   b) Describe different types of weathering and its engineering significance.   (10)

2 a) Describe the common methods to control subsurface water   (5)

   b) Explain (i) Hydraulic conductivity (ii) Artesian condition   (10)

3 a) Explain the classification of weathered rock mass.   (5)

   b) Explain how ground water can pose problems during the construction of tunnels.   (10)

PART B
Answer any two full questions, each carries 15 marks.

4 a) Describe any three physical properties which affect the strength of minerals.   (6)

   b) Explain: (i) Quartz   (ii) Feldspar   (iii) Gypsum   (9)

5 a) Give brief account of rock features that affect the strength of rock as construction
      material   (6)

   b) How are igneous and sedimentary rocks differentiated in field (site)? Add a note
      on their outcrops in Kerala.   (9)

6 a) Compared to Himalayan region earthquakes are less frequent in Kerala -
      Elucidate   (5)

   b) Write short notes on: (i) Granite   (ii) Shale   (10)

PART C
Answer any two full questions, each carries 20 marks.

7 a) What is meant by folds? Explain three different types of fold.   (7)

   b) Describe geological factors considered in the construction of tunnels; Add a note   (10)
      on overbreak in tunnel.

   c) What are contours? Draw a contour pattern (not on scale) representing a 60m high   (3)
      volcanic cone, with a dry crater of 25m deep, located along sea shore (use contour
      interval – 20m)

8 a) What are the damaging coastal processes? What are the coastal protection   (10)
   strategies?

    b) Describe different soil conservation measures   (10)

9 a) How Joints are formed? How do joints differ from fault?   (8)

    b) What are the causes of landslides? Add a note on their preventive measures.   (8)

    c) The dip amount and dip direction of two outcrop of a contact between limestone
   and sandstone, located at a distance of 500m apart, are 20^0 /N150^0 and   (4)
   21^0/N330^0. Identify the structure and its strike.

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