Total No of Pages 01   Roll. No..................
SEMESTER-THIRD   B.TECH(Evening)
"END SEM SUPPLEMENTARY EXAMINATION"   FEB-2019

CCE-205 SOIL MECHANICS

Time: 03: 00 Hours   Max.Marks: 40

Attempt any five questions. All questions carry equal marks.
Assume suitable missing data if any.

Q No. 1
  a) A soil mass has VOID RATIO 0.3. What will be its POROSITY?   2
  b) A soil mass has DRY density 2.00 g/cc and water content 18%. Find its BULK density.   3
  c) Write down a relation between void ratio, degree of saturation, water content and specific gravity.   3

Q No. 2
  a) What is punching strength of soil mass.   2
  b) Write an equation for shearing strength of soil mass in terms of cohesiveness and angle of internal friction of soil.   2
  c) Discuss the consolidation test of soil mass. Explain the related formulae.   4

Q No. 3   Define the following terms: 2
  a) Effective stress
  b) Over consolidation   3
  c) Time-factor
  d) Differentiate between water content and degree of saturation.   3

Q No. 4   Write brief notes on
  a) Boussinesq equation   2
  b) Shear strength of soil mass   2
  c) Newmark's Influence chart   2
  d) How do Landslides occur   2

Q No. 5
  a) Explain permeability equation   4
  b) How to find out the coefficient of permeability by constant permeameter method.   4

Q.No.6
  a) Explain the plasticity chart   4
  b) Define any two of the following terms:
    1. Liquidity Index   1
    2. Flow Index   1
    3. Consistency Index   1
    4. Toughness Index of soil mass   1