

P2640

[5154]-8

[Total No. of Pages : 2

B.E. (Civil)

ADVANCED GEOTECHNICAL ENGINEERING

(2008 Pattern) (Semester - I) (Elective - I)

Time : 3 Hours]

[Max. Marks :100

Instructions to the candidates:

- 1) Answer 3 questions from section I and 3 questions from section II.*
- 2) Answers to the two sections should be written in separate books.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Your answers will be valued as a whole.*
- 5) Use of electronic pocket calculator is allowed & is codes are not allowed.*
- 6) Assume suitable data, if necessary.*

SECTION-I

Q1) a) Explain 'clay minerals'. **[8]**

b) Explain 'A - line chart'. **[8]**

Q2) Discuss in detail 'soil classification'. **[16]**

Q3) a) Explain AEP, PEP & EP at nest. **[9]**

b) Explain 'Modified culman's method'. **[8]**

Q4) a) Derive the expression for KO, Ka & KP. **[8]**

b) Explain the steps for 'Anihared sheet pile design'. **[9]**

Q5) a) Explain 'Soil Nailing' & Roch Bothing. **[9]**

b) Discuss 'geosynthetics'. **[8]**

Q6) a) Explain 'geosynthetics in geoenvironment'. **[9]**

b) Discuss 'Prinquet & Lee' theory. **[8]**

P.T.O.

SECTION-II

- Q7)** a) Discuss different ‘Vibrations’. [8]
b) Explain ‘Basken’s method’. [8]
- Q8)** a) Explain ‘Paul’s Analysis’. [8]
b) Explain ‘Block vibration Test’. [8]
- Q9)** a) Discuss different ‘Soil stabilization techniques’. [9]
b) Explain Vibro-floatation.. [8]
- Q10)** a) Explain stages in inserting reinforcement for vibro-expanded pile. [8]
b) Discuss ‘Double-underreamed pile. [9]
- Q11)** Discuss ‘Rheology’ & ‘Rheological models’. [17]
- Q12)** Explain. [17]
- a) Creep
 - b) Secondary consolidation
 - c) Pring-ham model
 - d) Kelvin model.

