[5254]-8
B.E. (Civil)
AD. GEOTECH. ENGG.
(2008 Pattern) (Elective - I)

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:

1) *Answer three questions from section - I and three 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) Discuss different soil classifications.   **[16]**

OR

Q2) a) Explain 'montmorillonite' & 'DDI'.   **[8]**

    b) Explain 'A-line chart', with sample graph.   **[8]**

Q3) a) Explain 'modified culman's method.   **[10]**

    b) Derive equation for EP at rest.   **[7]**

OR

Q4) a) Explain the steps for 'Anchored sheet pile design'.   **[10]**

    b) Derive equation for K_a, K_p & K_o.   **[7]**

Q5) a) Explain 'Soil Nailing'.   **[5]**

    b) Discuss 'Geosynthetics'.   **[6]**

    c) Explain 'RE wall'.   **[6]**

OR

Q6) a) Explain 'Prinquet & Lee theory'.   **[5]**

    b) Discuss functions of 'Geosynthetics'.   **[6]**

    c) Explain properties of Geogrid.   **[6]**

SECTION - II

Q7) a) Explain 'Barken's Method'. [8]

    b) Explain 'Pauw's Analysis'. [8]

<div align="center">OR</div>

Q8) Discuss diff. methods for determination of Amplitude & Frequency. [16]

Q9) a) Discuss 'Vibrofloation'. [9]

    b) Explain 'Double Undreamed pile construction'. [8]

<div align="center">OR</div>

Q10) Discuss different soil improvement techniques. [17]

Q11) Discuss 'Rheology' & 'Rheological models'. [17]

<div align="center">OR</div>

Q12) Explain the following :

    a) Flookean models. [6]

    b) Newtonian models. [6]

    c) Geep. [5]

<div align="center">● ● ●</div>