 05 – 069 (E)

B. Tech Degree VII Semester Examination November 2005

CE 704 A/B (b) GROUND IMPROVEMENT TECHNIQUES

(2002 Admissions onwards)

Time : 3 Hours Maximum Marks : 100

I. (a) Explain with sketches different methods of dewatering systems. (14)

(b) Explain the aim of preloading technique. (6)

OR

II. Write notes on :

(i) sand drains (ii) stone columns

(iii) thermal stabilization (iv) electro osmosis. (4 x 5 = 20)

III. (a) Discuss the effect of cement stabilization. (10)

(b) Explain the different construction methods adopted for lime stabilization. (10)

OR

IV. (a) Explain the effect of mechanical stabilization on engineering properties of soil. (12)

(b) Write notes on :

(i) vibro flotation (ii) bituminous stabilization. (2 x 4 = 8)

V. (a) Differentiate between –

(i) suspension grout and solution grout

(ii) permeation grouting and compaction grouting. (2 x 4 = 8)

(b) Briefly explain the important properties of grout. (12)

OR

VI. Discuss the different civil engineering applications of grout. Explain with sketches, the application of grouts in seepage control in rock under dams. (20)

VII. (a) Explain the concept of reinforced earth. (5)

(b) Explain with sketches the major application areas of earth reinforcement. (15)

OR

VIII. (a) Explain the procedure for checking the external stability of reinforced earth retaining wall. (10)

(b) Differentiate between Tie back wedge analysis and coherent gravity analysis. (10)

IX. (a) Describe briefly the various classification of geotextiles. (12)

(b) Write note on the damage and durability of geosynthetics. (8)

OR

X. Explain with sketches the various functions of Geosynthetics. (20)

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