

Code :R7410110

R7

IV B.Tech I Semester(R07) Supplementary Examinations, May/June 2011
GROUND IMPROVEMENT TECHNIQUES
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Discuss the multi stage well points method for dewatering.
(b) Explain the mechanism of electro kinetic dewatering.
2. (a) What is grouting? Discuss the various methods of grouting and their application.
(b) Write short notes on suspension and solution grouts.
3. (a) Explain the methods of improving granular soils using in- situ densification.
(b) Distinguish between vibroflotation and terra probe methods of densifying loose deposits of sand.
4. (a) Discuss relative merits and demerits of sand wick drains over sand drains.
(b) Write a detailed note on installation of stone columns and explain load sharing mechanism in stone columns.
5. (a) Discuss the scope of soft aggregate in soil stabilization. Explain Mehra's method of stabilization.
(b) What are the admixtures used in soil cement? How do you design and test soil- cement?
6. (a) Distinguish between frictional fill and cohesive-frictional fill used in reinforced earth construction.
(b) Explain the effect of placement of reinforcement in cohesive and cohesionless soils.
7. (a) Discuss the commonly adopted tests for Geotextiles.
(b) Illustrate with neat sketches the various practical cases where geotextiles can be more efficiently used than other materials or techniques.
8. Write short notes on the following:
 - (a) CNS layer concept
 - (b) Under-reamed pile foundation
 - (c) Problems associated with BC soils.
