

IV B.Tech I Semester Supplementary Examinations, November 2006
GROUND IMPROVEMENT TECHNOLOGY
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the terms Vibro-Compaction and Vibro-Replacement, highlighting the typical characteristics and the relative effectiveness of both the terms. [16]
2. What other design or construction alternatives would be considered besides soil improvement such as compaction in order to overcome a difficult foundation problem? Explain in detail. [16]
3. (a) Describe different grouting techniques depending upon the stabiliser used? [8+8]
(b) Write a note on suspension and solution grouting.
4. (a) Explain any four engineering application of reinforced earth with sketches? [8+8]
(b) Describe the procedure of designing a reinforced earth wall?
5. (a) List the major functions that the Geotextiles are intended to perform. [8+8]
(b) Explain how Geotextiles can be used as separators.
6. (a) Discuss the consequences of swelling on structures. [8+8]
(b) Discuss and state how these two parameters.
 - i. swelling potential and
 - ii. plasticity index are related.
7. What is meant by dynamic compaction? Explain in detail the procedure of conducting laboratory test of compaction. [16]
8. Discuss in detail the various methods of lime addition to soils practical usage in engineering construction. [16]
