

IV B.Tech I Semester Supplementary Examinations, March - 2017

GROUND IMPROVEMENT TECHNIQUES

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any THREE questions from Part-B

PART-A (22 Marks)

1. a) What is Dynamic Compaction? [3]
- b) What is electro-osmosis? What are its advantages? [4]
- c) What is soil stabilization? What are its uses? [4]
- d) Write a short note on grouting. [4]
- e) What is geogrid? How it is used in soil stabilization. [4]
- f) Define soil nailing [3]

PART-B (3x16 = 48 Marks)

2. a) Differentiate between consolidation and compaction. Give examples. [8]
- b) What is vertical drain explain the design of vertical drain? [8]
3. a) What do you know about drainage of soils? [8]
- b) What are its uses? What are its ill effects? [8]
4. a) What is mechanical stabilization? [8]
- b) What are the factors affect the mechanical stability of a mixed soil? [8]
5. a) What are the design principles of reinforced earth walls? [8]
- b) What is stability of checks? [8]
6. a) What are different types of chemicals used in stabilization? [8]
- b) Write a short note Geo-textile. [8]
7. a) What is grouting write its objectives? [8]
- b) Explain different types of grouting techniques. [8]