

Code No: RT41016

R13**Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018

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) Distinguish between sand drains and geodrains. [3]
- b) Discuss about multistage well points. [3]
- c) Mention different types of limes. [4]
- d) Define soil nailing. [4]
- e) What are the properties of geogrids? [4]
- f) Explain about post grout test. [4]

PART-B (3x16 = 48 Marks)

2. a) Explain the importance of stone column technique. [8]
- b) Explain the objectives of densification in cohesion less soils. [8]
3. a) Describe with neat sketches about dewatering by sumps and ditches. [8]
- b) Explain the principle of electro-osmosis method of dewatering. [8]
4. a) Explain the stabilization of expansive soils by calcium chloride. [8]
- b) Explain about the mechanical stabilization, along with its affecting factors. [8]
5. a) What are design principles of reinforced earth walls? [8]
- b) Explain the stability checks of reinforced earth walls. [8]
6. a) Explain in detail the function of geotextile used as a separator. [8]
- b) Explain the properties of geotextiles. [8]
7. a) What is Hydraulic fracturing? What are its uses and applications? [8]
- b) Explain about stage grouting in detail. [8]