

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]