Code No: **R41016** **R10** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, March/April - 2016

GROUND IMPROVEMENT TECHNIQUES

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) What is dewatering? What are the objectives of dewatering?
   b) Describe with neat sketches about multi stage Well points Dewatering method.
2. a) Describe the post grout test? What is the use of this test?
   b) List out four physical characteristics of grouting liquid relevant to engineering applications.

3. a) Discuss in detail about the selection of field compaction procedure.
   b) Describe Vibroflotation Technique used in densification of granular soils with neat sketches.

4. Explain any one method of calculating the bearing capacity of the Stone columned Soft ground.

5. a) What is the principle behind the stabilization with sodium silicate?
   b) Describe the Rothfuch's method for proportioning of different material.

6. a) How soil is selected, in reinforced earth applications? What are the popular reinforcing materials? Explain briefly?
   b) How can the horizontal spacing of reinforcing strips can be derived for the material in a retaining wall.

7. a) State the advantages of geotexiles used in filtration and drainage systems over soil filters.
   b) Distinguish between "Drainage" and "Filtration" function of Geotextiles. Give applications based on each function.

8. a) Distinguish clearly expansive soils from soft clays.
   b) Describe the procedures for determining the swelling pressure of clays as per IS procedures