

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Summer 2017 - 18 Examination

Semester: 2**Subject Code: 03215152****Subject Name: Soil Improvement Techniques****Date: 21/05/2018****Time: 02:00pm to 4:30pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 A) Explain the need of ground improvement (05)

B) Write note on lime stabilization & important factors affecting lime stabilization. (05)

C) Explain concept of soil reinforcement. (05)

Q.2 Answer the following questions. (Attempt any three) (Each five mark) (15)

A) Write note on Crib walls.

B) Write note on soil nailing

C) Write note on types & applications of anchors.

D) What are the problems of expansive soils? Discuss in brief.

Q.3 A) What are the methods for identifications of expansive soils? Discuss each in brief. (07)

B) Write brief notes on various methods of grouting. (08)

OR

B) What do you understand by time rate settlements? Discuss preloading & prefabricated vertical drains. (08)

Q.4 A) Describe process of vibroflotation techniques with sketches. (07)

OR

A) Discuss installation of stone columns & its applicability. (07)

B) Write a note on emerging trends in ground improvement. (08)