



Code: 9D12202

M.Tech II Semester Supplementary Examinations January/February 2017

GROUND IMPROVEMENT TECHNIQUES

(Geotechnical Engineering)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 (a) What are the needs and objectives of ground modification?
(b) Explain the quality control test in shallow composition and explain the proctor needle test.
- 2 Explain various surface compaction techniques for the pavements.
- 3 How the granular piles are installed and explain them in detail about it?
- 4 (a) Write a short note on vacuum dewatering system.
(b) How geo-synthetics do helps in dam engineering and water resources?
- 5 (a) How the Bitumen effect the engineering properties of soil when it is used as a stabilizing material?
(b) What are the steps involved in soil cement stabilization?
- 6 (a) What are the functions involved in soil and rock grouting?
(b) What is compaction grouting? Explain the process, advantages and disadvantages.
- 7 Explain the components of reinforced earth. Write the design approach of the reinforced earth wall.
- 8 (a) How do you check for the tensile strength failure of soil nailed wall? What are the safety measures to be taken?
(b) Write a short note on:
(i) Durability of geo-textile.
(ii) Seam strength of geo textile.
