

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS:M.TECH
BRANCH:CIVIL(SMFE)**

**SEMESTER :II
SESSION : SP/22**

SUBJECT: CE558 GROUND IMPROVEMENT

TIME:2HRS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
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- Q.1(a) Enumerate the objectives of ground improvement techniques. [5]
Q.1(b) Discuss the various functions of geosynthetics. [5]
- Q.2(a) Explain the Volumometer method of determination of relative compaction in the field. [5]
Q.2(b) Write note on blasting method of ground improvement. [5]
- Q.3(a) What are Prefabricated Vertical Drains & what are the advantages of PVDs over sand drains? [5]
Q.3(b) Write note on vacuum consolidation. [5]
- Q.4(a) Explain the mechanism of stabilization using lime. What are the advantages associated with this. [5]
Q.4(b) Discuss Chemical Grouting. [5]
- Q.5(a) Describe ground freezing & state the principles of ground freezing [5]
Q.5(b) Explain the freezing process, freezing equipment & methods. [5]

:::::04/05/2022:::::