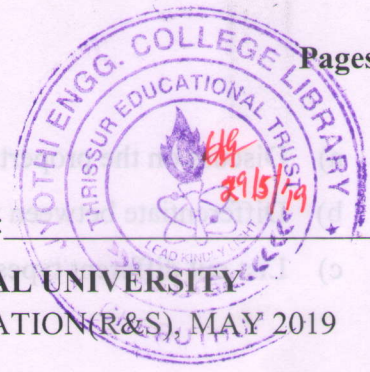


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_



**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**SIXTH SEMESTER B.TECH DEGREE EXAMINATION (R&S), MAY 2019**

**Course Code: CE362**

**Course Name: Ground Improvement Techniques**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any two full questions, each carries 15 marks.*

- |   |  | Marks |
|---|--|-------|
| 1 | a) Write on Ground Improvement potential.  | (5)   |
|   | b) What are the applications of grouting? Describe with the help of neat diagrams. | (10)  |
| 2 | a) Give notes on different types of ground improvement techniques.                 | (8)   |
|   | b) Discuss on permeation grouting.   | (7)   |
| 3 | a) What are the aspects and factors affecting grouting?                            | (8)   |
|   | b) Write short note on jet grouting.   | (7)   |

**PART B**

*Answer any two full questions, each carries 15 marks.*

- |   |  |      |
|---|--|------|
| 4 | a) What are different mechanisms involved in lime stabilization?                           | (5)  |
|   | b) What are ground anchors? What are its components and applications?                      | (10) |
| 5 | a) Write short note on lime fixation point and optimum lime content.                       | (6)  |
|   | b) List out and explain the effect of lime on physical and engineering properties of soil. | (9)  |
| 6 | a) Discuss the process of cement stabilization in the field.                               | (7)  |
|   | b) Write short note on soil nailing.   | (8)  |

**PART C**

*Answer any two full questions, each carries 20 marks.*

- |   |   |      |
|---|---|------|
| 7 | a) What is the range of depth of penetration of compaction if a weight of 40,000 kg is dropped from a height of 20 m on the ground surface? | (8)  |
|   | b) Write short note on the methods of dewatering.   | (12) |
| 8 | a) What are different compaction control tests in the field? Explain.   | (10) |
|   | b) Write short note on well point systems.  | (10) |

- 9 a) Discuss on the properties of compacted soil. (10)
- b) Differentiate between vacuum dewatering and electro osmosis. (5)
- c) List out different types of compaction techniques for ground improvement. (5)

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PART A

- 1) a) Discuss on the properties of compacted soil. (10)
- b) Differentiate between vacuum dewatering and electro osmosis. (5)
- c) List out different types of compaction techniques for ground improvement. (5)

PART B

- 2) a) Discuss on the properties of compacted soil. (10)
- b) Differentiate between vacuum dewatering and electro osmosis. (5)
- c) List out different types of compaction techniques for ground improvement. (5)

PART C

- 3) a) Discuss on the properties of compacted soil. (10)
- b) Differentiate between vacuum dewatering and electro osmosis. (5)
- c) List out different types of compaction techniques for ground improvement. (5)