

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

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| 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.

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| 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.

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|---|---|------|
| 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)
