Reg No.:_____ Name:_____

03000CE362062203

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S6 (S, FE) / S6 (PT) (S, FE) Examination January 2024 (2015 Scheme)

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)	Describe briefly major distribution of soil in India	(9)
	b)	What do you mean by "one shot "and "two shot" system. Explain with neat sketches	(6)
2	a)	Describe with the help of neat sketches the applications of grouting	(9)
	b)	Explain the advantages and disadvantages of compaction grouting	(6)
3	a)	Explain briefly Ground Improvement Potential	(5)
	b)	Explain the significance of the size of the particle in attaining mechanical stability	(5)
	c)	Briefly describe Reclaimed soil	(5)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	Explain the mechanism of calcium chloride stabilisation	(8)
	b)	Briefly describe about rock bolt types and its application	(7)
5	a)	What are ground anchors? What are its components and application	(10)
	b)	What do you understand by fly ash stabilisation	(5)
6	a)	Discuss the suitability and applicability of providing ordinary portland cement as a soil stabilising agent	(5)
	b)	Write briefly about soil nailing with neat sketches	(10)

PART C

Answer any two full questions, each carries20 marks.

7	a)	Explain the properties of compacted soil? Explain in detail about any 2 compaction control tests	(10)

	b)	Explain moisture density relationship	(5)
	c)	How does the grain size distribution affect the vibro floatation technique	(5)
8	a)	Explain briefly about sheepsfoot rollers and pneumatic rollers	(10)
	b)	Explain electro osmosis method and vaccum dewatering method for ground improvement	(10)
9	a)	Explain with neat sketches about the well point systems	(10)
	b)	What is meant by artificial recharge in hydraulic modification	(5)
	c)	Explain deep compaction method of explosion	(5)

****