Q.P. Code: 16CE146 **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech IV Year II Semester Supplementary Examinations May-2022

GROUND IMPROVEMENT TECHNIQUES

(Civil Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Explain various well point dewatering systems	L2	6M
	b	What are the objectives of dewatering?	L1	6M

OR

2		Explain the following grouting methods: (i) Compaction grouting (ii) Jet grouting	L2	12M

UNIT-II

3		Discuss the effectiveness of both vibro flotation and compaction piles for compacting the granular soils.	L2	12M

OR

4	a	Write short notes on densification of cohesive soils by Lime columns.	L1	6M
	b	Discuss the important formulae used in the improvement of soft clay deposits using stone columns.	L2	6M

UNIT-III

5	a	What are the factors affecting mechanical stabilized soil properties?	L1	6M
	b	Explain the mechanics of soil stabilization.	L2	6M

OR

6		Describe the properties of calcium chloride that are beneficial in stabilization of soils.	L2	12M

UNIT-IV

7	a	What is the objective of soil reinforcement?	L1	6M
	b	What are the factors governing the design of reinforced earth walls?	L1	6M

OR

8	a	What is reinforced earth? How does it differ from reinforced cement concrete and mechanically stabilized soil?	L1	6M
	b	Compare geotextiles and geomembrane.	L1	6M

UNIT-V

9		Give a detail discussion about various tests used for identification of expansive soils.	L2	12M

OR

10		Write a short note on: (i) Granular fill (ii) Drilled piers	L1	12M

*** END ***