Code No: J2208/R16

M. Tech. II Semester Regular Examinations, May-2017

GROUND IMPROVEMENT TECHNIQUES

(Transportation Engineering (22)

Time: 3 Hours **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1.	a	Discuss the dynamic compaction for ground improvement?	5
	b	Explain with sketches how soil nailing technique is used to provide stability of foundation of trenches and surrounding structures?	7
2.	a	Explain the chemistry of lime stabilization? What is lime fixation point and explain the design procedure of soil-lime stabilization	7
	b	Explain the factors affecting the cement stabilized soils.	5
3.	a	Explain how pre-wetting technique is useful in improving the properties of the soil.	6
	b	What are the techniques of grouting methods? Explain any two methods?	6
4.	a	Explain the how Shafts and drifts are grouted and state what type of materials are used?	6
	b	Explain how sand drains are effective in improving the properties of the soil.	6
5.	a	Explain the installations techniques of stone column with the help of neat sketch.	6
	b	Discuss the components of the reinforced earth wall with the help of neat sketch.	6
6.	a	What are prefabricated vertical drains? Write their suitability and spacing?	6
	b	Write in detail the principle, operation and applications of vibro-compaction method of ground improvement.	6
7.	a	Explain soil reinforcement. What is the mechanism? Explain reinforcement- soil Interaction?	6
	b	Discuss the design steps of the reinforced earth wall.	6
8.	a	Explain the salient futures and suitability of thermal stabilisation.	6
	b	Write a note on multistage well point system of dewatering technique.	6

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