Code No: **RT41016**



Set No. 1

IV B.Tech I Semester Advanced Supplementary Examinations, May - 2022 GROUND IMPROVEMENT TECHNIQUES

Time: 3 hours

(Civil Engineering)

Max. Marks: 70

Question paper consists of Part-A and Part-B Answer ALL sub questions from Part-A Answer any THREE questions from Part-B *****

PART-A (22 Marks)

1.	a)	Differentiate surface and at depth vibration compaction techniques	[4]
	b)	List out different methods of dewatering techniques with an neat sketches	[4]
	c)	State the necessity of stabilization of soil	[4]
	d)	Explain reinforced earth wall with an neat sketch	[3]
	e)	Define geosynthetics and describe their significance in civil engineering construction	[4]
	f)	Describe grouting and state their objectives	[3]
		PART-B $(3x16 = 48 Marks)$	
2.	a)	Explain any three densification methods of cohesion soils in detail with an neat	[8]
		sketch	
	b)	Discuss principle mechanism and suitability of pre-loading, geo-drains and stone columns with a sketches	[8]
3.		Explain in detail open sumps, single and multi-well point system of dewatering with neat sketches	[16]
4.	a)	List out different admixtures used in modification of ground. Write the significance of each	[8]
	b)	Explain cement, lime and bitumen stabilization of soil with their mechanism, suitability and applications	[8]
5	0)	What is soil rainforcement and list out different types of rainforcement and	101

5. a) What is soil reinforcement and list out different types of reinforcement and [8] explain principle of reinforcement

b) Explain principle mechanism and application of soil nailing in detail [8]

- 6. Explain functions, properties and applications of geotextile and gabions in [16] detail with sketch
- 7. a) Discuss hydraulic fracturing in soils and rocks and grouting pressure in detail [8] with an neat sketch
 - b) Explain grouting procedure in field in detail [8]

1 of 1

["]]"]"]"]] www.manaresults.co.in