Seat N	Vo.: _		Enrolment No
		GUJARAT TECHNOLOG m. e semester – i • examin	
Subject code: 714305N Date: 05-12-2014 Subject Name: Soil Stabilization & Grouting Technology Time: 10:30 am - 01:00 pm Total Marks: 70			
Insti	ructi 1 2. ]	•	ecessary.
Q.1	(a) (b)	Enlist the various stabilizing agents and discuss their suitability.	

type of cement in detail with necessary plots. Also explain the influence of moisture content and duration of mixing period on cement-soil mixtures. OR

- (a) Explain the basic principle of electrical and thermal stabilization. Justify 07 0.3their suitability with atleat one case study.
  - (b) Explain lime stabilization in detail and also discuss the role of various 07 stabilizing agents in development of strength.
- (a) Distinguish chemical grouts. Enlist the various parameters to be verified 07 **Q.4** in chemical grout design. How chemical grouts are more superior as compare to cement grouts?
  - (b) Explain in detail bituminous stabilization. Under which soil conditions 07 they are preferred? Classify the various bituminous stabilized mixtures with their applicability.

OR

- (a) Explain in detail the various techniques of grouting. What do you 07 **Q.4** understand by stage grouting, classify them and explain any one in detail with neat sketch
  - (b) Enlist various cement based grouts and explain their time vs. strength 07 characteristics in detail. Support your answer with necessary plots.
- Q.5 Differentiate between Newtonian and binghamian grouts. Explain the role 14 of physical, rheological and strength measurements on grout selection. Support your answer with necessary plots and case study.

OR

Q.5 Discuss gel strength in detail and explain various methods to measure gel 14 strength. Explain role of strength interaction in raw grouts design and explain wash-out test and its importance.

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