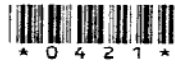


**13042 : Ground Improvement Techniques : 1 SFGE 1**

P. Pages : 1

Time : Three Hours



**AW - 3913**

Max. Marks : 80

- Notes :
1. All question carry equal marks.
  2. Illustrate your answer necessary with the help of neat sketches.
  3. Solve **any five**.

1. a) Explain clay mineral formation using building blocks with neat sketch. Also write short note on clay water relations. 8  
b) Explain with the help of neat sketch the structure and characteristics of main clay. 8
2. a) Explain in brief various admixtures. Which are used in stabilization of various soil deposits. 8  
b) Draw a neat sketch of grouting plant and equipments with their working procedure. 8
3. a) Discuss dewatering method of electro – osmosis drainage system. Discuss the Scott's equation of velocity of flow – in electro Osmosis. 8  
b) Discuss the thermal and electro-kinetic stabilization and their suitability. 8
4. a) Discuss the vibro-float technique of compaction for granular soils. 8  
b) Discuss the determination of bearing capacity of single lime column and lime column group. 8
5. a) Explain sand drain for Consolidation with the help of neat sketch. 8  
b) What is meant by grouting, state its purpose? Discuss different types of grout and their suitability. 8
6. a) Explain ground improvement in loose sand adopting blasting technique. Where is this method most suitable? Also state advantages and disadvantages. 8  
b) Discuss the applications of lime column method with the help of neat sketch. 8

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