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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(CE) (2011 Onwards E-I & II) (Sem.-7,8)****GROUND IMPROVEMENT TECHNIQUES**

Subject Code : BTCE-810

M.Code : 71869

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A****1) Answer briefly :**

- (a) What do you understand by Blasting?
- (b) Explain Pneumatic-Tired rollers.
- (c) What are micropiles?
- (d) What do you understand by Vibro-Flotation?
- (e) Define Solution Grouts.
- (f) Discuss Depth of Improvement.
- (g) What do you understand by Bio Technical stabilization?
- (h) What are the advantages of preloading methods?
- (i) What do you understand by Chemical Stabilization?
- (j) Describe briefly soil nailing technique.

### SECTION-B

- 2) Explain the jet grouting process.
- 3) What are geotextiles? What design considerations should be kept in mind while using geotextiles in pavements?
- 4) What are the effects of soil stabilization by heating?
- 5) Explain in detail the Pre-loading methods for ground improvement.
- 6) Describe the vibratory probe technique for compaction.

### SECTION-C

- 7) Explain in detail the method of construction of stone column and state how it is advantageous over lime column?
- 8) Explain in detail the behaviour of soil on reinforcing with geotextiles.
- 9) What are the various vibro compaction methods used for densification? Explain in detail.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**