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Reg. No	
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## **B.TECH. DEGREE EXAMINATION, MAY 2014**

## Seventh Semester

Branch: Civil Engineering

GROUND IMPROVEMENT TECHNIQUES (Elective 1) (C)

(Old Scheme—Prior to 2010 Admissions/Supplementary)

Time: Three Hours

Maximum: 100 Marks

## Part A

Answer all questions.

Each question carries 4 marks.

- 1. Explain the principle of ground improvement.
- 2. Briefly explain electro-osmosis.
- 3. Explain various stabilization methods.
- 4. Explain the mechanism of lime stabilization.
- 5. Explain the load transfer mechanism of reinforced earth.
- 6. Write short note on grouting.
- 7. Explain desirable properties of grout.
- 8. Explain stress-strain relationship of reinforced earth.
- 9. Write a note on durability of geotextiles.
- 10. Distinguish between woven and non-woven geotextiles.

 $(10 \times 4 = 40 \text{ marks})$ 

## Part B

Answer all questions.

Each question carries 12 marks.

11. (a) Explain well point system.

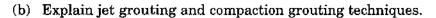
Or

- (b) Explain dewatering by electro osmosis.
- 12. (a) Explain in brief construction of lime-stabilized bases.

Or

- (b) Explain briefly bituminous stabilization.
- 13. (a) What is grouting? Discuss various grouting materials adopted. State their suitability.

Or



14. (a) Explain soil reinforcement interaction.

Or

- (b) State the construction procedure for reinforced earth retaining wall. How it differ from ordinary retaining wall.
- 15. (a) Discuss about the effect of geotextiles on strength, bearing capacity, compaction and permeability behaviour of cohesive soils.

Or

(b) Discuss the use of geotextile as a drainage media. Also explain durability of geotextile.

 $(5 \times 12 = 60 \text{ marks})$ 

