

## **All The best For Exams - Rejinpaul Team**

Anna University Exams Nov / Dec 2016 – Regulation 2013  
Rejinpaul.com Unique Important Questions – 7th Semester BE/BTECH  
CE6012 Ground Improvement Techniques

### **Unit I**

1. What are the various geotechnical problems faced with black cotton soil, laterite soil and alluvial soil deposits?
2. What are geosynthetics? What are its applications?
3. Write about the following. (a) Soil reinforcement (b) Chemical stabilization (c) Grouting (d) Electro-kinetic stabilization
4. Explain in brief the various methods of ground improvement
5. What are the factors influencing the selection of ground improvement techniques?

### **Unit II**

1. What is a deep well? When is it adopted? What are its merits and demerits?
2. Compare the various dewatering systems suitability, uses, merits and demerits.
3. Explain in brief the various steps for designing a dewatering system.
4. Explain in detail the well point system of dewatering
5. Explain in detail with a neat sketch the method of dewatering using sumps and ditches stating its advantages and disadvantages.

### **Unit III**

1. Write in detail the principle, operation and applications of vibro-compaction method of ground improvement.
2. What are the various stages of operation in installation and action of a lime pile?
3. Write in brief about the following. (a) Sand drains (b) Wick drains (c) Sand wicks (d) Plastic wicks
4. How does a sand compaction pile improve the soil? Write a detailed note on its installation and functioning.

### **Unit IV**

1. How do geosynthetics function as a filter? How does it differ in its function for drainage? Explain in detail with sketches.
2. What is the role of geosynthetics in protecting soil from contamination? Describe in detail.
3. With neat sketches explain in detail the various applications of reinforced earth for ground improvement
4. With the help of neat sketches, explain in detail the application of geosynthetics as a separator.

### **Unit V**

1. Write short notes on (a) Pre-grout investigation (b) Grout holes pattern (c) Selection of grout characteristics
2. Describe in detail how chemicals are used in stabilizing the soil with the help of an example
3. Write a detailed note on (a) Portland cement stabilization (b) Bituminous stabilization
4. Describe in detail about the various methods of grouting with neat sketches

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**Questions Are Expected for University Exams This May or may Not Be Asked for Exams**

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