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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Seventh Semester, B.E. - Civil Engineering

Semester End Examination; Dec. - 2019

Ground Improvement Techniques

Time: 3 hrs *Max. Marks: 100*

***Note**: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1 a.	List and explain the objectives of ground improvement.	6
b.	Briefly explain the different groups of ground improvements.	8
c.	What are the factors, which govern the choice of method of ground improvement?	6
2 a.	Explain explosion method of group improvement. Bring out the advantages of the method.	10
b.	How is compaction carried out in the field? Discuss the suitability of different types of rollers for field compaction.	10

UNIT - II

3 a.	Explain why ground water and seepage needs to controlled?	10
b.	Describe the essential steps involved in designing a dewatering system.	10
4 a.	Write short note on preloading techniques.	10
b.	What are Drains? Explain the different types of Drains.	10

UNIT - III

5 a.	Discuss the factors affecting the properties of cement soils.	10
b.	Discuss the use of fly ash in cement stabilization.	10
6 a.	What is lime stabilization? Discuss the mechanism of the same with baric reactions.	10
b.	Write short note on Bitumen stabilization.	10

UNIT - IV

7 a.	What is Grouting? Explain the different types of Grouting adopted in the field.	10
b.	Explain different types of Grouting materials.	10
8.	Write short notes on; i) Ground anchors ii) Crib walls iii) Gabions	20

UNIT - V

9 a.	What are the different types of geosynthetics? Explain.	10
b.	What are the important functions of geosynthetics? Explain any four of them.	10
10 a.	Explain mechanical properties of geosynthetics.	10
b.	Write short note on Hydraulic property of geosynthetics.	10

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