

6623

BOARD DIPLOMA EXAMINATIONS
SEPTEMBER/OCTOBER-2020
DCE – FIFTH SEMESTER
GEO TECHNICAL ENGINEERING

Time: 3 hours

Max. Marks: 80

PART – A

3 X 10 = 30

- Instructions:**
1. Answer **all** questions.
 2. Each question carries **Three** Marks.
 3. Answer should be brief and straight to the point and should not exceed Five simple sentences.

1. Define Residual soils and Transported soils.
2. Define the terms (a) Disturbed sample (b) Un Disturbed Sample.
3. Define the terms (a) Void ratio (b) Porosity.
4. Define permeability and compressibility of soils.
5. Define the terms (a) Ultimate Bearing Capacity (b) Safe Bearing Capacity of soils.
6. What is the importance of factor of safety in soils.
7. List the causes of foundation settlement.
8. Distinguish between compaction and consolidation.
9. Define significant depth of soils.
10. Distinguish between Standard Proctor Test and Modified Proctor Test.

[cont...]

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PART – B

5 X 10 = 50

Instructions: 1. Answer any **Five** questions
2. Each question carries **TEN** Marks.
3. Answer should be comprehensive and Criteria for Valuation is the content but not the length of the answer.

11. Describe Hydrometer analysis of fine grained soils with a neat sketch.
12. One cubic meter of wet soil weights 20kN. Its dry weight is 18kN. Specific gravity of solids is 2.67. Determine the water content, void ratio, porosity and degree of saturation.
13. Explain the laboratory procedure for determination of water content by oven drying method.
14. Explain Indian Standard Soil Classification System.
15. (a) Explain any one geophysical method of soil exploration.
(b) Write in brief about the field implication of consolidation of soils.
16. Explain field plate load test with a neat sketch.
17. (a) What is meant by compressibility of soil.
(b) Explain briefly the vertical pressure distribution in soil between loaded areas.
18. Explain the method of field measurement of compaction by using core cutter method.

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