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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL - 2019

DIPLOMA IN CIVIL ENGINEERING

GEO TECHNICAL ENGINEERING

SIXTH SEMESTER EXAMINATION

Time: 3 Hours **Total Marks: 80**

PART - A (10 x 3 = 30 Marks)

Note 1:Answer all questions and each question carries 3 marks

2:Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. List out the types of soils found in India.
2. What is meant by soil exploration ? State any two primary objectves of it?
3. The porosity of soil sample is 37%. Calculate its void ratio.
4. Write short notes on compressibility of soils.
5. Define a) Gross bearing capacity b) safe bearing capacity in foundations.
6. Write about the effect of water table on the bearing capacity of soils.
7. List various factors which cause settlement in soils.
8. Briefly explain consolidation in soils.
9. List the six important laboratory compaction tests.
10. Define optimum moisture content and maximum dry density.

PART - B (5 x 10 = 50 Marks)

Note 1:Answer any five questions and each question carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain in detail with a neat sketch, the Hydro meter analysis of fine grained soils.
12. Explain the method of disturbed soil sampling for testing.
13. Explain the laboratory method for determining plastic limit.
14. Explain the textural classification of soils with a neat sketch.
15. Explain the IS code equations for computing bearing capacity.
16. Describe the modified proctor's compaction test conducted in the laboratory.

17A. Describe briefly about ground water exploration .

B. Describe the procedure of conducting triaxial compression test carried out in the laboratory.

18A. Briefly explain the vertical pressure in soil beneath loaded areas.

B. Explain the Terzaghi's spring model analogy of compression springs in soils.

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