



c09-c-606(B)

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BOARD DIPLOMA EXAMINATION, (C-09)

JUNE—2019

DCE—SIXTH SEMESTER EXAMINATION

GEO TECHNICAL ENGINEERING

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Differentiate between residual and transported soils.
2. State any four methods of soil exploration.
3. Define the terms (a) void ratio (b) specific gravity.
4. Define the terms (a) permeability (b) consolidation.
5. Define shear strength.
6. Define the terms (a) ultimate bearing capacity (b) safe bearing capacity.
7. State any four remedial measures to be taken to avoid settlements in foundations.
8. Define optimum moisture content and maximum dry density.
9. State any three objectives of compaction.
10. Define pavement. State the types of pavement.

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PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Describe the hydrometer analysis and sieve analysis of soil particles.
12. Explain briefly about the subsoil and ground water exploration.
13. Explain the methods of determining the soil moisture content by oven drying methods.
14. Explain textural classification of soil with a neat sketch.
15. Explain the method of determining the ultimate bearing capacity of soil by plate load test.
16. Explain the vertical pressure in the soil beneath loaded areas.
17. Explain the Proctor's compaction test with the help of a neat sketch.
18. (a) Explain the method of determining the specific gravity of soil particles using pycnometer.
(b) State any six factors affecting compaction.

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