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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DCE - SIXTH SEMESTER EXAMINATION

GEOTECHNICAL ENGINEERING

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

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

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

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List the types of soils based on geological origin.

2. Write the need for soil exploration.

3. Define (a) moisture content and (b) density of soil.

4. Define permeability of soil.

5. Write the importance of bearing capacity of soil.

6. Define bearing capacity of soil.

7. Write any three causes for foundation settlement.

8. Define consolidation of soil.

9. List the apparatus required for core cutter method.

10. Name the laboratory tests for measuring compaction of soil.

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PART—B

15×4=60

- Instructions :** (1) Answer *any four* questions.
(2) Each question carries **fifteen** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11.** Explain the importance of soil mechanics in civil engineering.
- 12.** (a) Describe briefly the ground water exploration.
(b) Explain compressibility of soil.
- 13.** Explain the procedure for determination of water content by oven drying method.
- 14.** What are the various engineering departments working in central government.
- 15.** Name the various soil classification systems used in engineering.
- 16.** Write the IS code equation for computing bearing capacity and explain the terms.
- 17.** (a) Write the remedial measure for foundation settlement.
(b) Explain briefly principle of consolidation.
- * **18.** Define compaction. Write the objectives of compaction.

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