TED (15) – 5013

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

GEOTECHNICAL ENGINEERING

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Identify residual and transported soil.
2. Define plasticity index.
3. State Darcy's law.
4. List the two geophysical methods of soil exploration.
5. Describe proportioning of footings. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Analyze soil as a three phase system.
2. Discuss the importance of effective stress in the engineering behavior of soil.
3. Explain the procedure for finding out coefficient of permeability by variable head permeability test.
4. Identify the objectives of soil investigation.
5. Explain general and local shear failure.
6. Prepare the plan of a rectangular combined footing and list the circumstances under which it is essential.
7. Compile the precautions to be taken to avoid tilts and shifts during well sinking.

(5×6 = 30)