

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: CIVIL**

**SEMESTER: VI
SESSION : SP/2019**

SUBJECT : CE6007-GEOTECHNICAL ENGINEERING-II

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
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- Q1 (a) Discuss purpose of site investigation. [2]
(b) Discuss Vane Shear test apparatus. [3]
- Q2 What are the primary aim of general exploration and detailed exploration? [5]
- Q3 Discuss methods of determining vertical stress under a uniformly loaded area of any shape with the Newmark's chart. [5]
- Q4 (a) Discuss Boussinesq's formula for point loads [2]
(b) Discuss Westergaard 's formula for point loads [3]
- Q5 (a) Discuss Ultimate bearing capacity, Net ultimate bearing capacity, Net safe bearing capacity. [2]
(b) Discuss Gross pressure intensity & Safe bearing pressure for specified settlement. [3]
- Q6 (a) Discuss Local shear failure. [2]
(b) Discuss Punching Shear failure. [3]

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