Code: 9D12102

M.Tech I Semester Supplementary Examinations August 2016

THEORETICAL SOIL MECHANICS

(Geotechnical Engineering)

(For students admitted in 2012, 2013, 2014 & 2015 only)

Time: 3 hours Max. Marks: 60

Answer any FIVE questions

All questions carry equal marks

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1 Briefly explain the plastic equilibrium in a semi-infinite mass with a plane surface in soil.

2 Explain about lower bound solutions of the bearing capacity problems in soils.

3 What are the important rheological equations in soil mechanics and write the equations of rheological elements.

4 Write short notes on stress condition failures for soils.

5 Explain about stress in soil mass due to surface loads using Boussinesq equation.

6 Describe in soils strain relationships in soils and explain the octahedral strains.

7 Explain about stresses and strains in the Half-space due to a concentrated vertical load in soils.

8 Explaining about Rankine's states of plastic equilibrium in soils.

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