

Code: 9D12102

M.Tech I Semester Regular & Supplementary Examinations February 2016

THEORETICAL SOIL MECHANICS

(Geotechnical Engineering)

(For students admitted in 2011, 2012, 2013, 2014 & 2015 only)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 Briefly explain limit analysis, slip-line and limit equilibrium methods in soil mechanics.
- 2 Explaining about upper bound solutions of the bearing capacity problems in soils.
- 3 What are the importance rheological equations in soil mechanics? Write the equations of rheological elements.
- 4 Write short notes on stress and strain tensor in soil mechanics.
- 5 Explaining about stress in soil mass due to surface loads using Boussinesq's equation.
- 6 Describe the stress at active and passive states of plastics equilibrium.
- 7 Explaining about failure surface in the coordinate system of principal stresses in soils.
- 8 Explain about equations on rheological bodies consisting of two rheological elements in soil mechanics.
