GUJARAT TECHNOLOGICAL UNIVERSITY

4th Semester Civil Engineering – PDDC

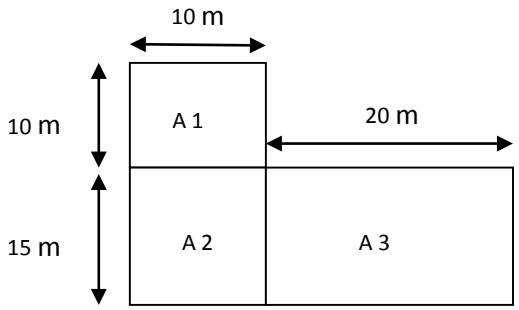
Subject Code & Name : X40603 - Soil Engineering

Important Question for Mid-Sem Exam

Date : 08-04-2015

Module-I Stress distribution

1. What is Geo-static stress? Why it is necessary to find the stress?
2. Determine the equation for concentrated load by Boussinesq Equation. (With assumptions).
3. Determine the equation for concentrated load by Westergaard's Analysis. (With assumptions).
4. What is pressure Bulb (Isobar)?
5. Explain the Newmark's influence chart.
6. A water tank supported by a ring foundation having outer diameter of 12 m and inner diameter of 10 m. The ring foundation transmits uniform load intensity of 160 kN/m2. Compute the vertical stress induced at a depth of 4 m, below the centre of ring foundation, using (a) Boussinesq Equation and (b) Westergaard's Equation, taking μ = 0.
7. What is contact pressure?
8. L-shaped building in plan exerts a pressure of 100 kN/m2 on soil. Determine the vertical stress at a depth of 6 m below the interior corner P.



Module-II Compaction

1. Which are the factors affecting compaction? Explain in detail.
2. Which soil properties are affected by compaction of soil?
3. Explain methods of compaction used in field.
4. Differentiate between standard proctor test and Modified proctor test.
5. Explain the standard compaction theory.

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