

الرقم الجامعي :

اسم الطالب:

King Saud University
College of Engineering
Department of Civil Engineering

CE 482 : Foundation Engineering
1st Semester 1427-1428 H
Time allowed: 75 minutes

First Mid-Term Examination

PROBLEM # 1

Select the most appropriate answer for each question:

- 1) Undisturbed samples can be obtained by:
 - Thin wall (Shelby) tube
 - Standard split-spoon sampler
 - Piston sampler

- 2) Punching shear failure is usually developed if the footing is resting on the surface of:
 - Dense sand or stiff clay
 - Loose sand or soft clay
 - Medium compacted sand or clay

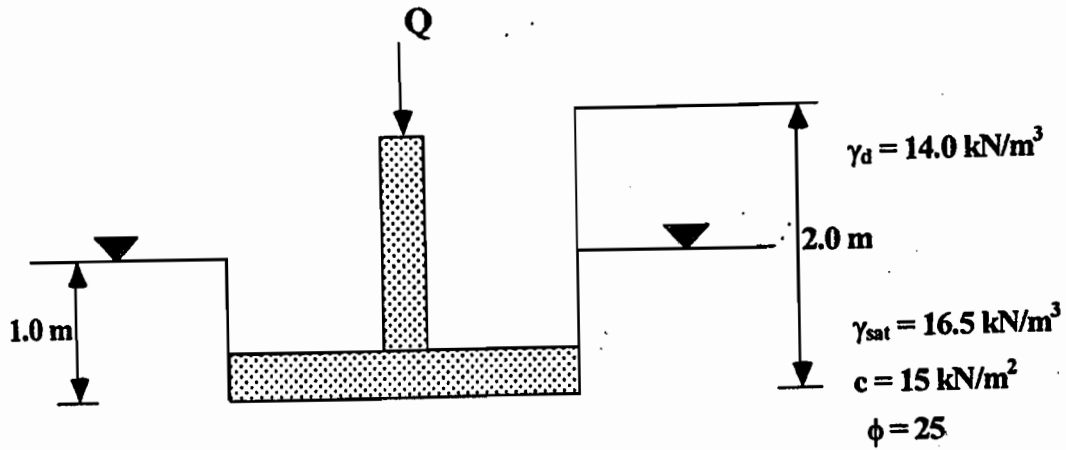
- 3) Disturbed samples can be used for:
 - Consolidation tests
 - Shear strength tests
 - Grain size analysis

- 4) Strain influence factor method for determining the immediate settlement of shallow foundations in sand was proposed by:
 - Meyerhof
 - Terzaghi and Peck
 - Schmertmann and Hartman

- 5) The method of geophysical exploration used for determining shear modulus of soil is:
 - Cross-hole seismic survey
 - Seismic refraction survey
 - Resistivity survey

PROBLEM # 2

A square footing is shown below, find the size of the footing, given that $Q=500$ kN, F.S.=3



PROBLEM # 3

Find the size of the footing which is required to limit the consolidation settlement to not over 40 mm. Use the approximate method (2:1) to obtain the average stress in the clay stratum.

