College of Engineering & Technology

Department: Mechanical Engineering   Marks: 8
Lecturer: Dr. Rola Afify   Time: 9:30 – 10:10
Course Code: ME362   Date: 5/12/2016
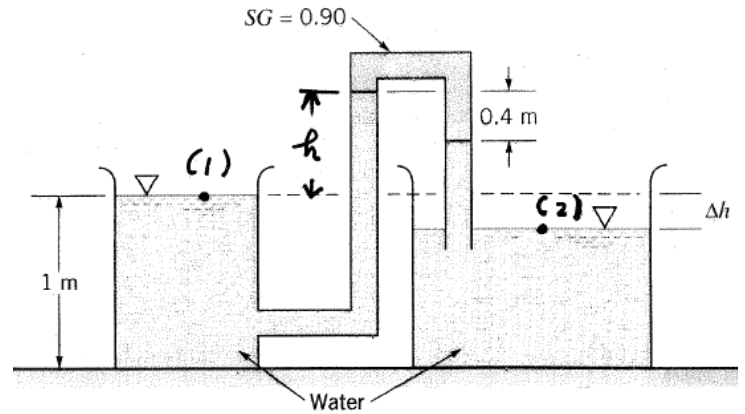
8

Name: R. N.:

Answer the following questions:
Question one (4 marks)
Determine the elevation difference, Δh, between the water levels in the two tanks show in figure.

Question two (4 marks)
A rectangular gate, 3m wide and 8m high, is located at the end of a rectangular passage that is connected to a large open tank filled with water, as shown in figure. The gate is hinged at its bottom and held closed by a horizontal force, F_H, located at the center of the gate. The maximum value of F_H is 3500 kN. Determine the maximum water depth, h, above the center of the gate that can exist without the gate opining.

Good Luck   1/1
Dr. Rola Afify