

Course No: CON 5318
Course Title: Water Resources management
Date: 11/03/2017
No. of Questions: (6)
Time: 60 Minutes
Using Calculator (Yes)

University of Palestine



First Midterm Exam
Second Semester
2016/2017
Total Grade: 30

Instructor Name: Eng. Hosam Malehy
Student No.: _____
Student Name: _____
College Name: Engineering
Dep. / Specialist: Civil Engineering
Using Dictionary (No)

Q.1 - Choose the correct answer:

(5 Marks)

1. The water wells excavated through confined aquifers are known as:
 - a) Artesian wells
 - b) pressure wells
 - c) both (a) and (b)
 - d) none of these

2. The topographic area that collects surface water through stream flow refer to :
 - a) Catchments
 - b) Watersheds
 - c) Drainage basins
 - d) All of the above

3. The ratio of volume drained water due gravity to the volume of saturated rock is known as
 - a) Specific retention
 - b) Specific yield
 - c) Specific capacity
 - d) Specific storage

4. The groundwater rise at soil layers under forces of surface tensions form particles at the zone of:
 - a. Zone of capillary
 - b. Zone of aeration
 - c. Zone of saturation
 - d. Zone of soil water moisture

5. If the void ratio for clay sample equal to **1.3**. the porosity of this sample :
 - a. 70.0 %
 - b. 56.5 %
 - c. 30.0 %
 - d. 76.9 %

Continue to the next page



Course No: CON 5318
Course Title: Water Resources management
Date: 11/03/2017
No. of Questions: (6)
Time: 60 Minutes
Using Calculator (Yes)

University of Palestine



First Midterm Exam
Second Semester
2016/2017
Total Grade: 30

Instructor Name: Eng. Hosam Malehy
Student No.: _____
Student Name: _____
College Name: Engineering
Dep. / Specialist: Civil Engineering
Using Dictionary (No)

Q.2 - Mark each of the following statements True or False: (5 Marks)

1. Well-graded of sedimentary rock texture refer to high uniform coefficient. ()
2. The clay has specific yield for water higher than sand. ()
3. Two similar porous mediums in the soil may be have various permeability . ()
4. About 90% of the developed aquifers consist of consolidated rocks layer. ()
5. The perched water bodies are special case of an unconfined aquifer. ()

Q.3 - Complete the sentence: (5 Marks)

1. The process of include of evaporation of water from the land surface and transpiration from vegetation or plant leaves.
2. The wells results in case of the piezometric surface lie above the ground level when the well penetrate a confined aquifer .
3. The , aquifuge and aquiclude are three types for the underlain confining beds for groundwater aquifers.
4. The refer to the amount of interconnected voids (space) available for fluid flow though a certain medium.
5. The poorly-sorted of sedimentary deposit having porosity.

Q.4 - List the types of aquifers ? (2 Marks)

.....
.....
.....
.....

Continue to the next page



Course No: CON 5318
Course Title: Water Resources management
Date: 11/03/2017
No. of Questions: (6)
Time: 60 Minutes
Using Calculator (Yes)

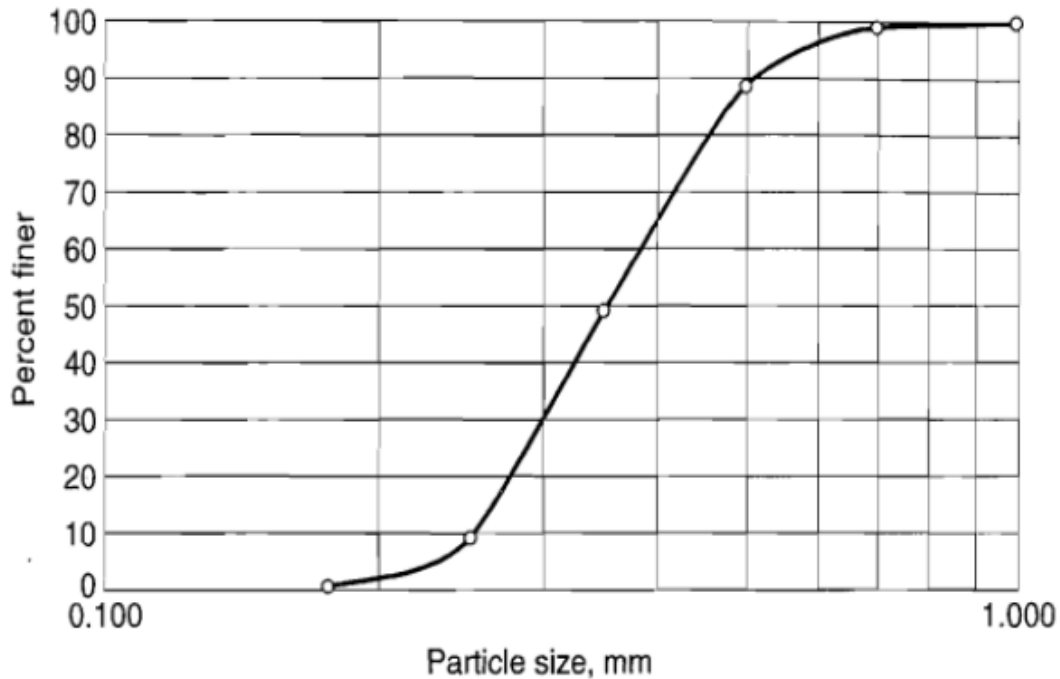
University of Palestine



First Midterm Exam
Second Semester
2016/2017
Total Grade: 30

Instructor Name: Eng. Hosam Malehy
Student No.: _____
Student Name: _____
College Name: Engineering
Dep. / Specialist: Civil Engineering
Using Dictionary (No)

Q.5 – For the given curve of grain-size distribution, Find the uniform coefficient for this sample and explain the sample graded? (3 marks)



.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Continue to the next page





Q.6 – During preparation process for establishing a certain well. A core sample from the aquifer medium is taken to assess the feasibility of the groundwater aquifer . The sample medium is saturated sand with weight = **3800g** and the core diameter **d = 12 cm** and height **h = 20 cm**. The volume of water drained from the sample by gravity was **630 cm³**

The grain density for sample particles = **2.65 g/cm³** (quartz mineral). The water density = **1 g/cm³**

The core sample is dried in oven to remove the water content and its weight become = **3530g**.

Calculate the following :

(10 Marks)

- a) specific yield,
- b) specific retention,
- c) porosity of this soil ,
- d) saturation percentage of the sand in this aquifer

Continue to the next page



University of Palestine



First Midterm Exam
Second Semester
2016/2017
Total Grade: 30

Instructor Name: Eng. Hosam Malehy
Student No.: _____
Student Name: _____
College Name: Engineering
Dep. / Specialist: Civil Engineering
Using Dictionary (No)

[illegible]

the end Good luck