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جامعة دمياط

- 1) Explain the different types of aquifers? (16 degree)
- 2) Explain how Darcy determined his equation? Try to rearrange the equation using Transmissivity (T). (20 degree)
- 3) The following table represents the data of groundwater aquifer. (24 degree)

Transmissivity ft ² /day	Area of discharge well ft ²	Hydraulic conductivity ft/day	Hydraulic gradient	Effective porosity
20000	0.8	1000	1/1000	20 %

Damietta University
Faculty of Science
Geology Department
4th Year Examination

Damietta University
1st Semester
(Jan 2024)

Hydrogeology
Code: (ج 404)
Time: 2 Hours
Full Mark: 90 degree

Answer the following questions: (Illustrate with simple sketches)

- 1) Explain the different types of aquifers? (16 degree)

Determine the following:

- a) The saturated thickness of the aquifer.
- b) Darcy velocity for the ground water.
- c) The true velocity of the ground water.
- d) The amount of ground water discharge flow.

4) Discuss the following: (30 degree)

- a) The interaction between surface water and ground water.
- b) How Transmissivity (T) can describe the shape of the cone of depression?
- c) The consequences of Excessive Ground Water Withdrawal.

Best regards

Prof. Dr. M. Abdelgaffi