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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SENIOR (LEVEL FOUR) STUDENTS OF GEOPHYSICS		
COURSE TITLE:	HYDROGEOLOGY		GE
DATE:	JAN, 2015	FIRST SEMESTER	TOTAL ASSESSMENT MARKS: 150
			TIME ALLOWED: 3 HOURS

Answer the following questions (Sketch maps and diagrams should be drawn whenever possible)

- 1- Illustrate the different types of the drainage system **(10 Marks)**
- 2- Explain the water well design and construction **(25 Marks)**
- 3- Write on Darcy's law and groundwater velocity determination. **(10 Marks)**
- 4- Discuss about the groundwater flow system and its governing factors. **(20 Marks)**
- 5- Give the definition of the followings: **(20 Marks)**
 - a- Storage coefficient
 - b- Hydraulic head and gradient
 - c- Well efficiency
 - d- Laminar groundwater flow
- 6- Using two observation wells and one production well, how could we perform a pumping test for an aquifer **(20 Marks)**
- 7- Write on water budget equation and discuss water condensation process. **(10 Marks)**
- 8- Answer the followings **(35 Marks)**
 - a- Explain why the freshwater in the Nile delta aquifer is limited.
 - b- What is the difference in the groundwater flow systems of Lower and Upper Cretaceous aquifers in Sinai. Mention the reasons.
 - c- Write briefly about Nubian Aquifer system.

EXAMINERS	DR. ZENHOM E. SALEM
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 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR (FOURTH THIRD YEAR GEOPHYSICS STUDENTS)			
	COURSE TITLE:	ENVIRUNMENTAL AND ENGINEERING GEOPHYSICS		COURSE CODE:4103
DATE:	DECEMBER, 2014	TERM: FIRST	TOTAL ASSESSMENT MARKS:100	TIME ALLOWED: 2 HOURS

1) Write a short essay on site investigation of a dam with emphasis on the geological and geophysical methods used , building of the dam , construction materials and the environmental impacts .

2) Write on ONE of the following :

- a. Site investigation of Archaeological artifacts OR
- b. Site investigation of heavily loading building

3-How to carry out LAND magnetic survey in archaeological exploration purposes

4-What is the meaning of " Resolution & ambiguity " in potential field – measuring methods.

5- Write about the different electrical resistivity arrays used for (Pa) measurements.

