




	<b>TANTA UNIVERSITY</b> <b>FACULTY OF SCIENCE</b> <b>DEPARTMENT OF GEOLOGY</b>		
	<b>FINAL EXAMINATION FOR FOURTH LEVEL (CHEMISTRY/GEOLOGY)</b>		
<b>COURSE TITLE:</b>	<b>GEOLOGY OF EGYPT</b>	<b>COURSE CODE:</b>	<b>GE 4130</b>
<b>January, 2018</b>	<b>TOTAL ASSESSMENT MARKS: 100</b>	<b>TIME ALLOWED:</b>	<b>2 HOURS</b>

**ANSWER THE FOLLOWING QUESTIONS:**

1. Write on the most important economic minerals and ore deposits that are present in the Phanerozoic succession of Egypt. (20 Marks)
  
2. Illustrate by drawing and brief description the lithostratigraphic succession of the Cretaceous rocks at the Bahariya Oasis, Western Desert, Egypt. (20 Marks)
  
3. Write Briefly on:
  - a) Oligocene facies and paleogeography. (20 Marks)
  - b) The Cretaceous/Tertiary contact at Esna area, Nile Valley. (20 Marks)
  - c) Paleozoic succession at Um Bogma area, West Central Sinai. (20 Marks)

EXAMINER	Prof. Abdel-Monem T. Abdel-Hameed	 وحدة ضمان الجودة كلية العلوم - جامعة طنطا  QUALITY ASSURANCE UNIT FACULTY OF SCIENCE - TU
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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	FINAL EXAMINATION FOR FOURTH LEVEL (SPECIAL GEOLOGY)			
COURSE TITLE:	PHANEROZOIC GEOLOGY OF EGYPT (1)	COURSE CODE:	GE 4101	
January, 2018	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED:	2 HOURS	

**ANSWER THE FOLLOWING QUESTIONS:**

1. Discuss briefly the main global tectonic events that have directly or indirectly affected the Paleozoic and Cenozoic geology of Egypt.

(20 Marks)

**2. Write in details on the following:**

- a. Stable and Unstable shelves of Egypt.

(20 Marks)

- b. Paleozoic succession at Umm Bogma area, Western Sinai.

(20 Marks)

- c. Lithostratigraphy of G. Maghara Dome, Northern Sinai.


(20 Marks)

- d. Geography of the Eastern and Western Deserts of Egypt.

(20 Marks)

EXAMINER	Prof. Abdel-Monem T. Abdel-Hameed
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	<b>TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY</b>			
	<b>FINAL EXAMINATION for level 4 (Geology) Students</b>			
	<b>COURSE TITLE:</b>	<b>Isotope Geology</b>		<b>COURSE CODE: GE4121</b>
<b>DATE:</b>	<b>JAN., 2016</b>	<b>TOTAL ASSESSMENT MARKS: 100</b>	<b>TIME ALLOWED: 2 HOURS</b>	

**Answer the following questions : Part I**

**I-Say why. (25 marks)**

1. We have to use three methods of U dating for one and same sample..
2. Fractionation of stable isotopes changes from the three physical states solid, liquid to gases
3. A positive  $\delta$  value means that the isotopic ratio of the sample is higher than that of the standard
4. Fresh water has less  $^{18}O$  values than oceanic water
5. All present-day ( $^{87}Sr/^{86}Sr$ ) values are greater than BABI? And continental values are the highest

**II- Answer the following: (25 marks)**

1. Explain how to use Oxygen Isotopes in Paleoclimate studies
2. Approximately what percentage of parent isotopes remains after 0.25 half-life have passed?
3. At what point in time does the isochron have a slope value of zero?
4. How does the slope of the isochron change as this rock gets metamorphism?
5. What are the significant parameters deduced using Sm- Nd dating.

**Answer the following questions : Part II**

**1- Put  $\checkmark$  or  $\times$  marks and correct the wrong ones:-**

**( 20 marks)**

- 1- SMOW is the standard used for carbonate and H isotopes
- 2- Positive epsilon Nd indicate crustal origin
- 3- The Sm- Nd method is useful for dating terrestrial rocks, stony meteorites and lunar rocks
- 4- Depleted mantle (DM) is characterized by very low  $^{143}Nd/^{144}Nd$  ratios and high  $^{87}Sr/^{86}Sr$  ratios.
- 5- Initial ratios is the measured ratios by instruments such as SHRIMP or Finnigan Mat 262 mass spectrometer
- 6- The half life time of Sm is very short

بالتفصيل انظر باقي الاسئلة



TANTA UNIVERSITY  
FACULTY OF SCIENCE  
DEPARTMENT OF GEOLOGY

EXAMINATION FOR FOURTH LEVEL STUDENTS

COURSE TITLE:	PETROLEUM GEOLOGY -1	CODE NO. GE 4109		
DATE:	JANUARY , 2018	FIRST TERM	TOTAL ASSESSMENT MARKS: 100	TIME : 2 HOURS

**1- Give reasons on the followings :** (30 marks)

- a) The Electron Spin Resonance technique is used for source rock evaluation.
- b) The rock textures affect the characters of porosity and permeability.
- c) Some reservoirs show minor oil occurrence.

**2- Discuss the following subjects:** (30 marks)

- a) Mechanical properties of oils.
- b) Porosity stimulation.

**3- Compare between the followings :** (10 marks)

- a) Asphalt and kerogen.
- b) Gasoline and discl.
- c) Gas pool and oil field.

**4- Complete the following :** (10 marks)


- a) Petroleum is defined chemically as.....
- b) Chemical equation of biological fermentation is written as .....

**5- Give an account on the followings.** (20 marks)

- a) Classification of chemical reservoir rocks according to sedimentary textures.
- b) Factors affecting the characters of fragmental reservoir rocks.

EXAMINERS	PROF.DR. NADER ELGENDY	DR. SHADIA ABDELRAHEEM
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 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR FRESHMEN (4TH LEVEL) STUDENTS OF SPECIAL GEOLOGY		
	COURSE TITLE:	SPECIAL COURSE (2) Computer Applications in Geosciences	COURSE CODE: GE 4125
	DATE: 11 JANUARY, 2018	TERM: 1ST	ASSESSMENT MARKS: 50
			TIME: 2 HOURS


**WRITE ON THE FOLLOWINGS, SUPPORTED WITH DRAWINGS:**

- 1- Main four functions implemented in LINDA 10 MARKS
- 2- Scales of applications of DEMs in Environmental Modeling. 10 MARKS
- 3- Data sources, generation and manipulation techniques of DEMs. 10 MARKS
- 4- TINs and Regular Grids for representing elevation data. 10 MARKS
- 5- Watershed Analysis Using DEMS 10 MARKS

*Examiners:* Prof Alaa A. Masoud & Dr Samir Zaki Kamh

BEST WISHES

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	FINAL EXAMINATION for Level 4 (Chemistry- Geology) Students		
	COURSE TITLE:	GEOCHEMISTRY	COURSE CODE: GE4105
DATE:	JANUARY, 2018	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

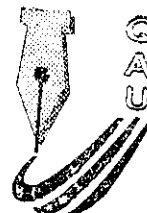
Answer the following questions: (Part I)

**1-Complete the followings:** (20 marks)


- 1- A-type granites characterize by ..... $\text{SiO}_2$  and ..... $\text{Na}_2\text{O} + \text{K}_2\text{O}$  with ..... magma type and characterize by some index minerals such as..... and ..... Setting
- 2-Geochemical classification of the elements based on ....., ....., ..... and classified into ....., ....., .....
- 3-Chlorine, fluorine and water ..... in the ..... of crystallization with ..... of complexity and increasing of ..... substitution
- 4-Oceanic granites have ..... magma type, characterize by high contents of ..... and low contents of ....., They also formed as a .....
- 5-Uranium - thorium mineralization occurs in ..... rocks as..... contains high amount of ....., ....., .....elements
- 6- The tholeiitic magma characterized by high amount of ..... and low amount of .....whereas Calc-alkaline magma contains high amount of ..... and low amounts of .....
- 7- Ni and Cr elements occurs in ..... rocks such as ....., contains high amount of .....elements
- 8-Normative composition of S-type granites should include .....,and..... and formed in .....setting due to ..... and have ..... magma type.
- 9-Volcanic arc granites have a ..... magma type and originated in ..... tectonic setting
- 10- Meteorites are classified into ....., ....., ..... and similar to ....., ....., ..... respectively.

**2-Put  $\checkmark$  or  $\times$  marks and correct the wrong ones:-** (10 marks)

- 1- Rhyolite in Cox et al. (1979) volcanic rock classification characterize by low  $\text{SiO}_2$  and  $\text{Na}_2\text{O} + \text{K}_2\text{O}$
- 2- The mantle are mainly formed from lithophile elements whereas the crust are mainly formed from chalcophile elements such as Ca and Li
- 3- Oceanic granite is A- type granites, mainly alkali feldspar granites, contains garnet and formed in island arc setting.



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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		GE4111
	EXAMINATION FOR SENIOR (LEVEL FOUR) STUDENTS OF CHEMISTRY-GEOLOGY		
	COURSE TITLE:	HYDROGEOLOGY 1	
DATE:	JAN, 2018	TERM: FIRST	TIME ALLOWED: 2HOURS

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

- 1- **Write short notes on the followings** **(30 Marks)**
  - a- Time-drawdown analysis (Jacob method) to determine transmissivity and storage coefficient of a water bearing formation.
  - b- Cone of depression and well interference.
  
- 2- **Write on the followings:** **(20 Marks)**
  - a- Hydrologic cycle and water budget
  - b- Drainage basins and its types.
  - c- Stream hydrograph and its applications.
  
- 3- **Compare between the followings:** **(20 Minutes)**
  - a- Groundwater flow system in case of isotropic and anisotropic aquifer and heterogenous and homogeneous aquifers.
  - b- Gaining and losing streams.
  - c- Confined and unconfined aquifers
  - d- Storage coefficient in confined and unconfined aquifer
  
- 4- **Discuss Dracy's Law and how hydraulic conductivity, transmissivity and velocity could be derived.** **(20 Minutes)**
  
- 5- **What is the relationship between the followings:-** **(10 Minutes)**
  - a- Porosity and specific yields and specific retention.
  - b- Pressure head, Total head and elevation head
  - c- Head loss and hydraulic gradient.

<b>EXAMINERS</b>	<b>PROF. DR. MOHAMED GAMAL ATWIA</b>	<b>PROF. DR. ZENHOM E. SALEM</b>
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