


سيولوجيا

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SENIOR (FOURTH YEAR) STUDENTS OF GEOLOGY			
	COURSE TITLE:	SUBSURFACE GEOLOGY AND HYDROGEOLOGY		
DATE:	JUN., 2013	TERM: SECOND	TOTAL ASSESSMENT MARKS: 60	TIME ALLOWED: 3 HOURS

Part II: Hydrogeology (60 Minutes, Total Marks 20)

(Sketch maps and diagrams should be drawn whenever possible).

1- Write short notes on the following subjects:- (7.5 marks)

- a) Hydrogeology of the Nile Delta and Nile Valley aquifers.
- b) Water quality criteria for irrigation and industrial purposes.
- c) Placement of well casing and cementing for well completion.


2- Discuss the following: (7.5 marks)

- a) Properties of the chemical contaminate is an important factor affecting groundwater contamination.
- b) How Meteoric water line is used for illustrating the hydrologic processes affect oxygen and hydrogen isotopic composition of water

3-Explain the following:- (5 Marks)

- a) In deep holes several reductions in casing may be required.
- b) The advantages of adding gypsum to a soil is that the soil texture and drainability can be improved.
- c) Electrical resistivity is used as a surface method for groundwater exploration.
- d) Tritium is used for age dating the young groundwater but ^{14}C is used for the old groundwater.

EXAMINERS	DR. NADER ELGENDY	DR. MOHAMED GAMAL ATAWIA
	DR. ZENHOM SALEM	DR. SHADIA ABELRAHEEM

TANTA UNIVERSITY				
FACULTY OF SCIENCE				
DEPARTMENT OF GEOLOGY				
EXAMINATION FOR FOURTH LEVEL STUDENTS OF CHEMISTRY-GEOLOGY				
	COURSE TITLE: Final Exam of Mining Geology			COURSE CODE: GE4208
	DATE: JUNE. 2014	TERM: SECOND	TOTAL ASSESSMENT MARKS:100	TIME ALLOWED: 2 HOURS

Part One: Write briefly on the following, Illustrate your answer with drawing. (50 marks)

- 1) Compared between surface mining method and underground mining method.
- 2) Drawn sketch of solid mineral reserves
- 3) What do you means by:-
 - i) Balance reserve.
 - ii) Room and Pillar.
 - iii) Cut and filling stoping
 - iv) Longwall stoping
 - v) Block caving
- 4) What the differences between
 - i) Mine and Mining.
 - ii) Stope and stoping.
 - iii) Prospecting works and proving works.


Part Two: Answer The Following Questions. (50 marks)

- 1) Methods of mine ventilation.
- 2) The material for underground support.
- 3) Main stages of extracted surface ores, blasting caps detonators and dynamites.
- 4) Mine air, storage of explosives and conveyor of mine transport.

Examiners:

Prof. Ibrahim Salem


Prof. Hassan Haraz

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR 4th LEVEL STUDENTS (CHEMISTRY & GEOLOGY)		
COURSE TITLE:	PHOTOGEOLOGY	COURSE CODE: GE 4204	
DATE:	31/ 05 /2014	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Write briefly on the following:

- 1- Characteristics of vertical photographs..... (10 marks)
- 2- Compare between pocket and mirror stereoscopes..... (14 marks)
- 3- Relief displacement and factors affecting it.....(12 marks)
- 4- Advantages of an aerial photographs over a map.....(12 marks)
- 5- Major drainage patterns and their geologic significances.....(15 marks)
- 6- Drainage density, photo-tone and obsequent streams.....(15 marks)
- 7- Photogeologic appearance of intrusive igneous rocks and faults.....(22 marks)

EXAMINERS	Prof. Mahmoud H. Ashmawy
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 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SOPHOMORES (FOURTH YEAR) STUDENTS OF CHEMICAL/ GEOLOGY		
COURSE TITLE:	PRECAMBRIAN GEOLOGY		COURSE CODE: GE4206
DATE:	JUNE, 2014	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100 TIME ALLOWED: 2 HOURS

1- Discriminate between the following:

- a- Classification of the Precambrian rocks given by El Ramly and Akaad (1960) and Akaad and Noweir (1980)------(20 marks)
- b- Field occurrences of ophiolites and rocks of island arc system------(20 marks)
- c- Geochemistry and Tectonic setting of ophiolites and metagabbros------(20 marks)
- d- Older granites and younger granites------(20 Marks)
- e- Dokhan volcanics and Hammamat sediments------(20 Marks)

Best wishes

Examiner	Prof. Dr. Gaafar El Bahariay	
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TANTA UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF GEOLOGY

EXAMINATION FOR FOURTH YEAR STUDENTS OF GEOLOGY


COURSE TITLE:	BASIN ANALYSIS		COURSE CODE: GE4210
DATE: MAY 23, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the Following Questions:

- 1- Mention the different kinds of data you need to study sedimentary basins.....(20 marks)
- 2- Describe the list of features that can be used to establish paleocurrent directions.(20 marks)
- 3- Explain briefly how basins are made and classified.....(20 marks)
- 4- Explain the following sentences:
 - a. Framework grains are useful for provenance interpretation.....(10 marks)
 - b. The importance of quartz, feldspar and rock fragment percentages in differentiation between the 4 provenance types of sandstones.....(10 marks)
- 5- Write briefly on FOUR ONLY of the following:
 - a. Physical and chemical compactions during burial.....(5 marks)
 - b. Quartz cement and feldspar authigenesis.....(5 marks)
 - c. Carbonate cementation and their replacement features.(5 marks)
 - d. Smectite-illite transformation during burial diagenesis...(5 marks)
 - e. Porosities in sedimentary rocks and their types.....(5 marks)

EXAMINERS	DR. AHMED M. EL-SHISHTAWY	Dr. Hossam A. Tawfik

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	TANTA UNIVERSITY FACULTY OF SCIENCE GEOLOGY DEPARTMENT			
	EXAMINATION FOR SENIOR (LEVEL FOUR) STUDENTS OF GEOLOGY			
COURSE TITLE:	HYDROGEOLOGY 2	GE 4212		
DATE:	JUN, 2015	SECOND SEMESTER	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

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

1- Discuss the groundwater exploration using surface geoelectrical method.

(20 Marks)

2- Explain why the evaluation of Sodium hazards in water is important for irrigation.

(20 Mark)

3- Choose the correct answer and explain

(20 Marks)

a- The precipitations have (heavier) or (lighter) isotopic contents compared to the original vapor.

b- The Higher the climate temperature, (the lighter) or (the heavier) the isotopic contents of the precipitations

c- The origin of the Groundwater of the Western Desert Nubian aquifer is (the Nile River) or (the paleowater) water.

4- Write short notes on DRASTIC index

(20 Marks)

5- Discuss the followings:-

(20Marks)

a- The factors affecting water quality of the Nile Delta Aquifer


b- The groundwater flow systems of Lower and Upper Cretaceous aquifers in Sinai.
Mention the reasons.

c- The sources of the groundwater recharge, Age and geographical Location of the Moghra and fissured Limestone aquifers in Egypt.

EXAMINERS	DR. MOHAMED ATEF NOWEIR	DR. ZENHOM E. SALEM
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	FACULTY OF SCIENCE			
	DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR FOURTH LEVEL STUDENTS OF GEOLOGY			
	COURSE TITLE:	Final Exam of Mining Geology		COURSE CODE: GE4208
DATE:	JUNE. 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS:100	TIME ALLOWED: 2 HOURS

- 1) Write short article on mining excavations, illustrate your answer with drawing. (20 marks)


Write short notes on the following questions:

1. Methods of mine ventilation, ore reserves and conveyor of mine transport. (15 marks)
2. Types and storage of explosives. (20 marks)
3. Mine drainage and mine air. (15 marks)
4. Types of surface mining methods. (15 marks)
5. Types of underground supports. (15 marks)

Examiners:

Prof. Ibrahim Salem

Prof. Bothaina El-Desoky

	TANTA UNIVERSITY			
	FACULTY OF SCIENCE			
	DEPARTMENT OF GEOLOGY			
EXAMINATION FOR SENIORS (FOURTH YEAR) STUDENTS OF GEOLOGY				
COURSE TITLE:	Final Exam of Ore Mineralogy			COURSE CODE:GE4226
DATE:	JUN. 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Part I: Answer the following questions: (50 Marks)

1- Explain the following: (30 Marks)

- a- Numerical aperture.
- b- Rotatable stage.
- c- Quantitative optical properties.
- d- Grinding and polishing machines.
- e- Ocular lenses.

2- With drawing only answer the following: (20 Marks)

- a- Components of ore microscope.
- b- Kalb light-line test.
- c- Zones of mechanical and thermal deformation.
- d- Shapes and structures of microindentation hardness.
- e- Free working distance.


Part II: Write briefly on the following, illustrate your answer with drawing: (50 Marks)

- 1- Oolitic texture and colloform texture in supergene minerals.
- 2- Zonal, core and relict replacement textures.
- 3- Hematite- ilmenite, Ulvospinel-Magnetite and Hematite-Magnetite exsolution textures.
- 4- Cubanite-Chalcopyrite, Tetrahedrite-Chalcopyrite and Chalcopyrite-Sphalerite exsolution textures.
- 5- Solid Solution in native metals .

Examiners: Prof. Ibrahim Salem

Prof: Bothaina El-Desoky

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	EXAMINATION FOR SENIORS (FOURTH YEAR) STUDENTS OF GEOLOGY			
	COURSE TITLE:	Final Exam of Ore Mineralogy		COURSE CODE:GE4226
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- 4- Cubanite-Chalcopyrite, Tetrahedrite-Chalcopyrite and Chalcopyrite-Sphalerite exsolution textures.
- 5- Solid Solution in native metals .

Examiners: Prof. Ibrahim Salem

Prof: Bothaina El-Desoky

مسئولو حيا

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SENIORS (FOURTH YEAR) STUDENTS OF GEOLOGY			
	COURSE TITLE:	REMOTE SENSING (2)		COURSE CODE: GE 4216
DATE:	27 MAY, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following Questions (using drawing when it possible)

1- Write **SHORT NOTES** on the following:-

- Distortions in radar images. (20 marks)
- The steps of the image classification process. (20 marks)
- Principles of imaging radar (20 marks)


2- Compare between **TWO ONLY** of the following:- (30 marks)

- Box and maximum likelihood classifiers.
- Using gamma ray and electrical surveys in the exploration processes.
- Supervised and unsupervised classifications.

3- Complete the following Sentences:- (10 marks)

- The choice of the image classification algorithm depend on
- The scatterplot shows
- The characteristics of illuminated object which affect on the degree of the radar image interpretation, such as
- Error of omission refers to....., where the error of commission refers to
- The disadvantages of the Minimum Distance to Mean classifier are

EXAMINERS	Prof. Alaa A. Masoud	Dr. Samir Z. Kamh
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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR FOURTH LEVEL (SECOND SEMESTER) CHEMISTRY/GEOLOGY STUDENTS		
	COURSE TITLE:	HYDROGEOCHEMISTRY	
DATE:	JUNE, 2014	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

(Sketch maps and diagrams should be drawn whenever possible).

1- Explain the following :-

(Total Marks 30)

- a) The advantage of adding gypsum to a soil is that the soil texture and drainability can be improved.
- b) Hardness in water react with soap to form precipitates and with certain anions present in water to form scale.
- c) Mines can produce a variety of groundwater pollution problems.
- d) The oxidation-reduction or redox reactions are unlike the other reactions because they are mediated by microorganisms.

2- Write short notes on the following subjects:-

(Total Marks 20)

- a) Water quality criteria for irrigation and industrial purposes.
- b) Attenuation of groundwater pollution.

3-Discuss the following

(Total Marks 30)

- a) Mass transport processes in groundwater.
- b) Electrokinetic effects of clay on groundwater.
- c) Hydrogeological applications of isotopes.


4- Write short notes on

(Total Marks 20)

- a) Hydrogeochemical cycle.
- b) The effects of temperature and humidity on oxygen and hydrogen isotopic composition of precipitations.

Best regards

EXAMINERS	DR. MOHAMED GAMAL ATAWIA	DR. ZENHOM SALEM
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	TANTA UNIVERSITY FACULTY OF SCIENCE			
	DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SENIORS (FOURTH LEVEL) STUDENTS OF CHEMISTRY-GEOLOGY			
COURSE TITLE:	Final Exam of Ore Mineralogy .		COURSE CODE: GE4226	
DATE:	JUNE. 2014	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Part I: Ore Mineralogy (60 mins)

Write briefly on the following questions; illustrate your answer with drawing: (50 marks)

- 1- Solid solutions in native metals.
- 2- Colloform textures in supergene minerals.
- 3- Hematite-ilmenite, ulvospinel-magnetite and hematite- magnetite exsolution textures.
- 4- Pentlandite-pyrrhotite , chalcopyrite-sphalerite and bornite-chalcocite exsolution textures.
- 5- Core, relict and selective replacement textures.

Part II: Ore Mineralogy (60 mins)

A) Write on the following; illustrating your answer with drawing: (50 marks)

- 1- Objective lenses.
- 2- Reflectance and anisotropism.
- 3- Microindentation hardness.
- 4- Grinding and polishing equipments.

Examiners:

Prof. Ibrahim Salem

Prof. Bothina El-Dsoky

With Best Wishes