الأصل

جامعة أسيوط
كلية العلوم - قسم الجيولوجيا

بسم الله الرحمن الرحيم

امتحان التحريرى لطلاب الدراسات العليا
المادة: (Special Course, 645 G)
الدرجة: 100 درجة ٢٠١٤/٢٠١٣م الزمن: ثلاث ساعات

السؤال الأول: (30 Marks)

1- Write on the lithostratigraphy of the Cretaceous sequences at southwestern Sinai.

السؤال الثانى: (30 Marks)

1- Discuss the following boundaries:
   i- Cretaceous/Paleogene (k/P) boundary
   ii- Coniacian/Santonian(C/S) boundary

السؤال الثالث: (40 Marks)

1- Classify the Paleocene-Eocene rocks at southwestern Sinai.
2- Define the syn-rift sediments at southwestern Sinai; mention the main rock units of them.

تمت الأسئلة مع اطيب الأمنيات بالنجاح والتفوق

ا.د/ ناجح عبدالرحمن عبيدالله

Examin of post graduate

Doploma in Geology

(Advanced Course of Paleontology September 2014)

623 geology

Answer of the questions:

1) Give abreif account about mineralogical variations in bivalve shells related to environmental controls. (15 Marks)
2) Explain the following expressions (terminology). (20 Marks)

Prismatic structure, Nacreous structure.,

Foliated structure. , lamellae structure.

3) Give a short notes about microstructure groups. (15 Marks)

Good Luck.

Prof.Dr. Abel Ali Apdalla Hegab

prof. Adel Aly

Assiut University
Faculty of Science
Geology Department

جامعـــــــة أسيـــــــوط
كلية العلوم – قسم الجيولوجيا

Master Exam, 2014

Course: **Special Course (Applied Palynology), G645** Time Allowed: **3 Hrs**

** Total mark= **100 marks***

Write an article on ONLY FOUR of the following questions:

(Question 1, 25 marks)

A- Spore coloration. (12.5 marks)

B- Safety precautions in the Palynology lab. (12.5 marks)

(Question 2, 25 marks)

Use of stable carbon isotopes in geological interpretation.

(Question 3, 25 marks)

A- Standard palynological processing technique. (15 marks)

B- Define five only of the following: T_{max}, TOC, Pyrolysis, S1, HI , PP, TAI (10 marks)

(Question 4, 25 marks)

A- Determination of amount of organic carbon content in sediments and sedimentary rocks. (12.5 marks)

B- Organic geochemical, physical, and palynological analyses used in detecting level of thermal maturation of organic carbon in a potential hydrocarbon source rock. (12.5 marks)

(Question 5, 25 marks)

Different methods used in identification of kerogen types.

End of Exam, Good Luck

Examiner: Prof. Dr. Magdy S. Mahmoud and Dr. Amr S. Deaf (Geology Department)

جامعة أسيوط

كلية العلوم – قسم الجيولوجيا

امتحان الحفريات الدقيقة (٦٣٠ج)

لطلاب الدراسات العليا

دور سبتمبر ٢٠١٤م

الدرجة : ١٠٠ درجة الزمن : ثلاث ساعات

Answer three questions only :

I. The first question :

Write on :

1. The techniques applied for the separations of different microfossils from rocks.
2. The foraminiferal shell morphology.
3. The main late Creteous Planktonic biozones.

II. The second questions :-

What do you know about :-

1. The composition and microstructure of the Foraminiferal shell.
2. The Principles of classification of Foraminifera.
3. The main factors affect the distribution of Foraminifera in marine environment.

III. The third question :-

Write on :

1. The Coccolith morphology and their applications.
2. The ecology of Ostracods and Coccolithophores.
3. The evolutionary trends in Ostrocoda.

IV. The Fourth question :-

Write on :-

1. The morphology of spores and Pollen grains.
2. The Palynofocies and their importance.
3. The distribution of Conodonts.
4. The ages of Fusuline limestone and Nummulitic limestone.

مع تمنياني بالتوفيق ،،،

جامعة أسيوط قسم الجيولوجيا – كلية العلوم

Geology Department , Faculty of Science, Assiut University

Final Examination in well logging (September, 2014)

For M Sc. Students, Faculty of Science, Assiut University

Answer **only two** of the Following Questions

Q1 Discuss the principles and applications of only three of the following logging techniques (40 marks)

(a) Neutron logging

(b) Gamma Ray logging

(c) Resistivity log

(d) Caliper log

(e) Density log

Q2 Write a short essay on the different types of logging techniques used in groundwater exploration studies.

Q3 Circle the correct answer(s).

1. Which type of resistivity tool can be used in a well which has been drilled with oil-base mud?

a)-Laterolog **b)** Induction c)Either Laterolog or Induction

2. Circle two of the following which can cause the resistivity of a rock to increase:

(a) An increase in connate water resistivity

(b) An increase in formation Porosity

(c) A decrease in formation porosity

(d) An increase in water saturation

3. Generally with resistivity tools the greater the spacing between the measuring electrodes the greater the depth of investigation.

a)True b)False d)undefined

4. Which of the following indicate that a rock is permeable? (Circle all that apply).

a)Low gamma-ray b)SP deflection

c)Low resistivity d)High porosity

5. The density porosity tool responds to the total formation porosity not effective porosity.

(Circle one)

a) True b) False c) It Depends on the depth of invasion

6. Gamma ray log is a log of the natural radioactivity of the formation along the borehole, measured in API, and particularly useful for distinguishing between

a)sands and shales in a siliclastic environment b) sands and shales in a clayey environment

c)sands and shales in a carbonate environment

7. The Spontaneous Potential (SP) log measures the natural or spontaneous potential difference between the borehole and the surface, without any applied current. The most useful component of this potential difference is the electrochemical potential because it can cause a significant deflection in the SP response opposite

a) permeable beds b)impermeable beds c) highly resistive rocks d)saline formation

8. The magnitude of the SP deflection depends mainly on

(c)

a) Degree of permeability b) the salinity contrast between the drilling mud and the formation water c) the clay content of the permeable bed d)b and c
e) a and c f) a, b, and c

9. Therefore the SP log is commonly used to detect

a) permeable beds b) estimate clay content c) formation water salinity.

10. Complete each of the following sentences

a) Porosity logs measure the fraction or percentage of _____ in a volume of rock. Most porosity logs use either _____ or _____ technology
b) Resistivity logging works by characterizing the rock or sediment in a borehole by measuring its _____.
c) sonic log provides a formation interval transit time, which typically varies _____and _____. The logging tool consists of a piezoelectric transmitter and receiver and the time taken to for the sound wave to travel the fixed distance between the two is recorded as an interval _____ time.

GOOD LUCK

Assiut University
Faculty of Science
Geology Department

جامعة أسـيوط
كلية العلـوم
قسم الجيولوجيا

Final Examination in Groundwater Geochemistry

September, 2014 — Code: (G 632) — 100 degrees — Time: 3 Hours

Answer the following questions

1) Talk about the standards determining the quality of groundwater for drinking, industrial and agricultural uses (15 degrees)

2) The chemical elements of the groundwater are derived from several sources, discuss the chemistry of groundwater (15 degrees)

3) Discuss the different sources of groundwater contamination: (20 degrees)

4) Groundwater contamination is two types, natural and Man-made, discuss this statement (50 degrees)

Best Wishes
Prof. Dr. El-Sayed Abo El-Ella
Prof. Dr. Abdel Azim Ebraheem

جامعة أسيوط

كلية العلـــوم - قسم الجيولوجيا

امتحان طلاب تمهيدى الماجستير)

مقرر (G 602) جيولوجيا تصويرية واستشعار عن بعد

سبتمبر ٢٠١٤ الزمن : ٣ ساعات

PART I

Photogeology

ANSWER ONLY FOUR OF THE FOLLOWING

1. **What are the essential interpretation elements in photo-interpretation? (12.5 marks)**
2. **Explain how the drainage patterns are important in the geologic interpretation of aerial photographs; and how they may reflect underlying structure or lithology. (12.5 marks)**
3. **Write a concise account on the factors affecting the photographic appearance of rocks. (12.5 marks)**
4. **Summarize the main photo-characteristics of horizontal beds and medium dipping beds. (12.5 marks)**
5. **Give a concise article on the most photographic characteristics of intrusive and extrusive igneous rock. (12.5 marks)**

GOOD LUCK !

Prof.Dr. Moustafa M. Youssef

Assiut University Faculty of Science Geology Dept		جامعة أسـيوط كلية العلوم قسم الجيولوجيا

Final Exam for M.Sc. students in

Advanced Geomorphology (646G)

September 2014 **Time Allowed: 3hours**

PART-I *(50 marks)*

Write on TWO questions ONLY:

1- **Landforms associated with Strike-Slip faulting.**

2- **Differential fluvial erosion on layered rocks.**

3- **Karst processes and hydrogeology.**

PART-II *(50 marks)*

Write on TWO questions ONLY:

1- **The different types of the Sand dunes.**

2- **Landforms associated with wind erosion.**

3- **a-Dust and Loess.**

b-Sand Shadows and Sand Drifts.

GOOD LUCK

Prof. Dr **Ahmed Reda El Younsy** *Dr. Mahmoud A. Essa*

Assiut University Faculty of Science Geology Department		جامعة أسيوط كلية العلوم قسم الجيولوجيا

Final Exam. In Geophysical Exploration For M.Sc. Students (G633)

Sept., 2014 **Time: 3 hours**

1. Answer the following Question:

What are the steps for drilling Target

2. Answer Three Only of the Following:

i. Factors governing the choice of exploration areas

ii.Explain how can applied Gravity method to detected Ore body

iii. Principal steps in the exploration for Ore body

iv. Explain how can applied Magnetic method to detected Ore body

========== Good Luck ==========

Dr. Mohamed Fekry Khalil

Assiut University Geology Department	Geology Department Faculty of Science, Assiut University	15 September, 2014

Time allowed: 3 hours

إمتحان دراسات عليا (ماجستيرجيولوجيا)
جيولوجيا الخزانات البترولية (٦٣٤ ج)

Answer**FOUR ONLY** of the following questions, illustrating your answers by sketches wherever possible:(25 degrees for each of the four answered questions)

1- Explain how the porosity and permeability of reservoir rocks can be evaluated from well logging analysis?
2- Illustrate the methods of estimating water and hydrocarbon saturations of a reservoir from electrical resistivity logs.
3- Write short notes on TWO ONLY of the following:
Mud logging – Core analysis – Drill stem testing and sidewall sampling.
4- Discuss how you can locate the better quality reservoir rock.
5- Write shortly on the distribution and stratigraphic levels of oil reservoirs in the Western Desert Province.
6- Write a short account on the coastal and submarine Egyptian gas fields.

GOOD LUCK

Prof. Dr. EmadRamzyPhilobbos

(٤)

بسم الله الرحمن الرحيم

جامعة أسيوط
كلية العلوم - قسم الجيولوجيا

امتحان التحريرى لطلاب الدراسات العليا
المادة: (Field Geology, 601 G)
الزمن: ثلاث ساعات ٢٠١٣/٢٠١٤م الدرجة: 100 درجة

Part One (50 Marks)

السؤال الأول: (20 Marks)

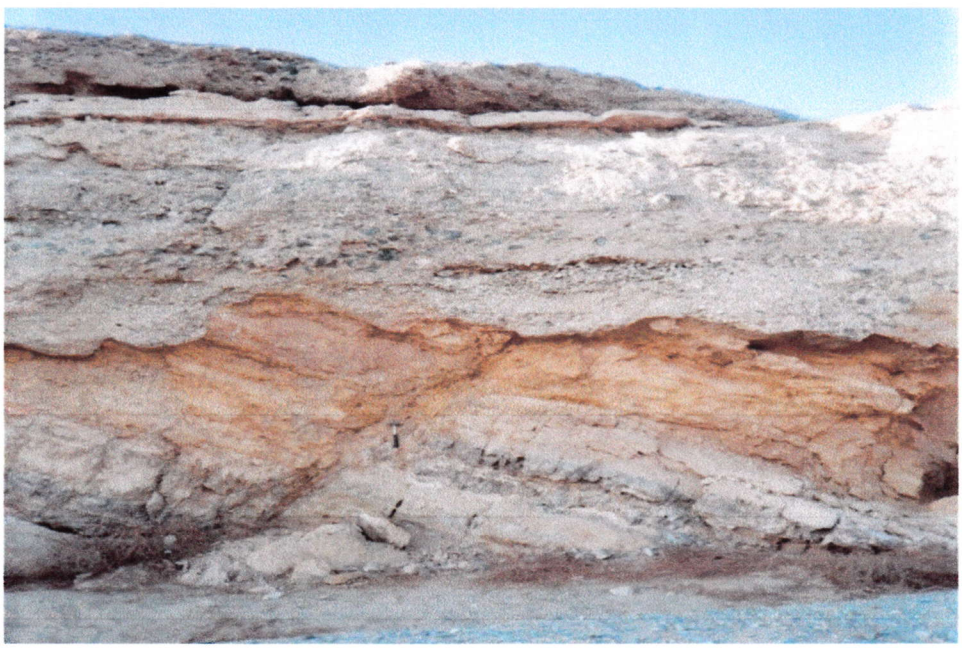
1- Compare between primary structures and tectonic structures: give examples, using drawings when possible.

السؤال الثانى: (15 Marks)

2- Discuss the following:
   i- Structural-cross section
   ii- Important of Compass

السؤال الثالث (15 Marks)

- Write a geologic report on the following field photograph; illustrate your answer with drawing.



(٢)

Part two (50 Marks)

Answer TWO questions only with drawing as you can:

1. Discuss briefly:
   a) Nature, characters and types of contacts between rock units in the field. (12.5 marks)
   b) Volcanic sequences. (12.5 marks)

2. Explain briefly:
   a) Types of enclaves in plutonic intrusions. (12.5 marks)
   b) Structural varieties of migmatites. (12.5 marks)

3. Give an account on:
   a) Foliation and lineation related to folds in metamorphic rocks. (12.5 marks)
   b) Specific elements of geological reports. (12.5 marks)

تمت الأسئلة مع اطيب الأمنيات بالنجاح والتفوق

ا.د/ ناجح عبدالرحمن عبيدالله **د/ عثمان محمد النادى**

Assiut University **Faculty of Science** **Geology Department**		**M.Sc. Exam.** **September 2014** **Time : 3 Hrs**

Subject: *Magnetic Method (G637)*
Level: *M. Sc.*
Total marks: *100*

Answer only <u>Four</u> questions: (25 marks for each)

1. What are the main differences and similarities between gravity and magnetic methods?

2. Write short notes on the qualitative interpretation of magnetic data.

3. How do you carry out data processing on magnetic field?

4. Discuss briefly the origin of the earth's magnetic field.

5. Explain in short notes the applications of magnetic method on the structure and tectonic studies.

الممتحن : ا.د /حمزة احمد إبراهيم

Assiut University
Faculty of Science
Geology Department

جامعة أسـيوط
كلية العلـوم
قسم الجيولوجيا

Final Examination for Diploma and Master Students
(Geographic Information Systems)

September, 2014	Code: G 645	100 Points	Time: 3 Hours

Give full and clear answer supported with drawings.
Answer only the required points.

1) Any geographic phenomena can be represented on computer by different ways, give notes on point, line and area representations of different geographic features (22 points)

2) Discuss the concept of topology and the spatial relationship of features (22 points)

3) Give short notes on **SIX** only of the following: (36 points)

   A. Data analysis
   B. Database Management Systems
   C. Spatiotemporal data
   D. Data storage
   E. Spatial analysis
   F. Spatial referencing
   G. Raster representations

4) Define **FIVE** only of the following terms: (20 points)

   A. Spatial database
   B. Geographic phenomenon
   C. TIN
   D. Projection
   E. Datum
   F. Geographic object

Best Wishes
Prof. Dr. Abdel Azim Ebraheem
Dr. Ahmed Sefelnasr

جامعة أسيوط

كلية العلوم- قسم الجيولوجيا

امتحان الماجستير " ٦٤٥ج المقرر الخاص "

(خزانات المياه الجوفية في مصر)

الزمن: ثلاث ساعات تاريخ الامتحان: سمبتمر ٢٠١٤

Write in detail on Four only of the following main aquifers in Egypt

(25 degree for each)

1- Nile Valley and Delta aquifer Systems.
2- Coastal aquifer Systems.
3- Nubian Sandstone aquifer system in the Western Desert.
4- Nubian Sandstone aquifers in Gulf of Suez and Sinai.
5- Groundwater in the Fissured and Krstified rocks.

Good Luck

Prof.Dr. H. Ibrahim *Prof.Dr. A.A Faurag*

Assiut University Geology Department	Geology Department Faculty of Science, Assiut University	September 8, 2014

Time allowed: 3 hours

إمتحان دراسات عليا (ماجستير جيولوجيا)
تحليل التتابعات الرسوبية (647ج)

Answer **THREE ONLY** of the following questions, illustrating your answers by sketches wherever possible:

1- Write a short account on '**thegeneral characteristics of cyclic sediments**'.

2- "Configuring the relation between **sea level changes and sediment supply** is important in the understanding of **sediment buildup versus time**".Discuss briefly this statement.

3- Write a short account on the '**hierarchyof sedimentary cycles, their superposition and causes**'.

4- Discuss briefly the role of studying '**Milankovitch cycles**' and '**Rhythmic bedding**' in understanding the '**Event Statigraphy**'.

GOOD LUCK

Prof. Dr. EmadRamzyPhilobbos

Assiut University
Faculty of Science
Geology Department

M.Sc. Exam.
September 2014
Time : 3 Hrs

Subject: *Advanced Petroleum Geology (629 G)*
Level: *M.Sc.*
Total marks: *100*

PART ONE : *(50 marks)*

ملحوظه هامه: الأمتحان في صفحتين

Answer only four questions: (12.5 marks for each)

1. a) What is meant by the reservoir rock? What are the main different types of these reservoirs?
   b) What are the main evidences supporting petroleum migration and those opposing it?

2. **Write short notes on:**
   a. Evidences supporting the organic origin of petroleum.
   b. Theories of oil movement.
   c. Desulphurizing bacteria.
   e. Conditions of an oil reservoir.

3. Explain briefly the favorite environment of petroleum formation.

4. **Give the differences between:**
   a. Primary and secondary migration.
   b. Source bed and Kerogene shale.
   c. Effective porosity and total porosity.
   d. Vertical and lateral movement of oil.

5. **a)** Exploration techniques start with methods that involve the obvious: ***Look for oil on the surface of the ground.*** Explain briefly the different direct methods of petroleum explorations.
   b) What are the main characteristics controlling the pore pattern of an oil reservoir rock?

PART TWO

المتحن : ا.د /حمزة احمد إبراهيم

Assiut University

Faculty of Science, Geology Department

M. Sc. Exam. **Structural Geology (618G)**

2013/2014

Part two: (50 marks)

Answer TWO questions only of the followings:

1. Discuss the statement: Tectonism and Magmatism. (25 marks)

2. Give short account on: (25 marks)

a) Origin, character and classification of continental rifts. (12.5 marks)

b) Various types of plate boundaries. (12.5 marks)

3. Write brief notes on: (25 marks)

a) Oceanic floor spreading. (12.5 marks)

b) Subduction zones. (12.5 marks)

Good luck!

Dr. Osman M. El Nady