Mansoura University
Faculty of Science
Geology Department
Course Title: Field Geology and Survey
Code: (G 305)
Full marks: 60

First Semester (2012)
3rd level, Geophysics
Time: 2 hours
Date:31/12/2012

Answer the following Questions?

Question1: Write an essay on *A or B*:

A- Preparing illustration and writing reports.

B- Philosophy and organization of a field study

Question 2: Complete *only 10 items*:

1- The followings are some equipment for sampling and recording .....

2- A compass bearing is .....

3- Secondary characteristics can be used (1).....and (2).....

4- The basic purposes of the preliminary steps of stratigraphic sections are (a)..... (b)..... (c).....

5- The description of the section is generally undertaken in this order: (a)..... (b) ..... (c) ..... (d) ..... (e).....

6- Offsets are needed to piece together..... of stratigraphic sequence.

7-Among the bedding patterns: (a)..... (b)..... (c) .....and (d).....

المستوى الثالث - جيوفيزياء - طرق التنقيب المغناطيسية جف ٣٠٨

Mansoura University
Faculty of Science
Geology Department

جامعة المنصورة
كلية العلوم
قسم الجيولوجيا

Magnetic Prospecting Final Exam (3rd level Geophysics) 2012/2013

طرق التنقيب المغناطيسيه جف ٣٠٨ (المستوى الثالث برنامج الجيوفيزياء) ٢٠١٣/١/١٠ صباحا

Answer the Following Questions (Total mark 60)

1- Complete the following: (20 mark)

a- Second vertical derivative (SVD) enhances ----------anomalies.

b- Regional magnetic anomalies have ---------- extension and ----------depths

c- Remnant magnetization is related to ---------- earth's magnetic field.

d- At Curi temperature all magnetic materials ----------their magnetization.

e- Intensity of magnetization I depends on ----------, ---------- and ----------

f- Gradiometers consists of ----------sensors

g- Secular variations of the earth's magnetic field are related to ---------- origin

h- Declination D is angle between ---------- and ----------

i- Inclination I of the earth's magnetic field ---------- towards the North.

j- Magnetic susceptibility of K igneous rocks is ---------- than sedimentary rocks.

2- Mention the reasons for the following : (20 mark)

a- At intermediate latitudes magnetic anomalies have positive and negative closures

b- Magnetic data interpretation is complex than gravity data

c- Proton magnetometer is widely used than other magnetometers.

d- Magnetic corrections is simple than gravity.

e- Sensor of the proton magnetometer contains water or kerosene

3- Write on the following: (20 mark)

a. Magnetization of rocks and their types

b. Airborne magnetic survey

c. Factors affecting amplitude of the magnetic anomalies

d. Reduction to the north magnetic pole (RTP)

Best Wishes

*Prof. Dr. Hosni Ghazala**

Prof. Mohamed Refaat Sherif
Prof.Dr. Abdel Kader Zalata
Dr. Hamdi Seraq El Din

8- Every scientific report consists of four elements that are arranged logically as follows: (a)..... (b)..... (c).....and (d) .....

9- Rock samples can be used to (1) ..... (2)..... (3) .....and (4) .....

10- The compound number of the collected fossils consists of (1)..... (2)..... and (3).....

11- The reconnaissance has two basic purposes (1).....and (2).....

12- The three kinds of field information are (1)....., (2).....and (3).....

13- Beds are studied and described according to (1)....., (2).....and (3)....

Question 3: Answer *only four* of the followings:

1- Interpret the outcrop given below:

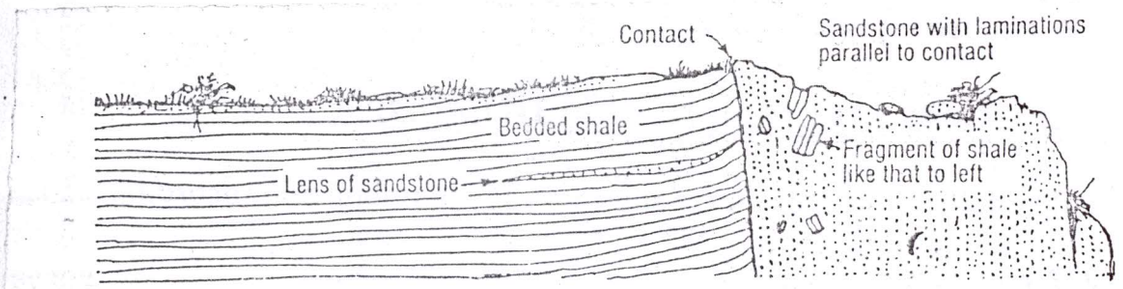

Fig. Vertical face exposing shale and sandstone with features.

2- Write short notes on trace fossils and bioturbation?

3- How to collect macrofossils?

4- What are the preliminary steps in studding the stratigraphic sections?

5- Draw a columnar section with title and accessory data?

6-illustrate the Postdepositional structures?

الممتحنون*: أ.د. حسنى حمدان* أ.د. آدم الشحات أ.د. عبد القادر زلطة أ.د. عبد الحميد طه

المستوى الثالث - جيوفيزياء - طرق التنقيب الزلزالية - ١ جف ٢٠٢

Mansoura University
Faulty of Science
Department of Geology

January, 03, 2013
Time allowed: 2 hours
Full Marks: 60 marks

Seismic Exploration Method
(جف 303)

Answer the following questions:

First Question *(5 m arks for each)*

Write short notes on each of the following:

a) Ground roll
b) Reciprocal time and intercept time
c) Information needed to determine the depths to the first and second interfaces.

Second Question *(10 marks for each)*

a) List two situations where seismic refraction methods are not useful? Why?
b) Explain graphically the ray paths showing the possible routes for multiple reflectors?

Third Question *(5 m arks for each)*

Answer the following questions

a) What is Snell's law? Why it is important in seismic studies?

b) What is vibroseis? How does it work?

d) Why is the reversed profile shooting is Important in refraction seismic interpretation?

الممتحنون أ.د/ حمدى صيصه*- ا.د. حسنى حمدان د. فريد مكروم د. وليد شكرى

المستوى الثالث - جيوفيزياء - طرق التنقيب المغناطيسية جف ٣٠٨

Mansoura University
Faculty of Science
Geology Department

جامعة المنصوره
كلية العلوم
قسم الجيولوجيا

Magnetic Prospecting Final Exam (3rd level Geophysics) 2012/2013

طرق التنقيب المغناطيسيه جف ٣٠٨ (المستوى الثالث برنامج الجيوفيزياء) ٢٠١٣/١/١٠ صباحا

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المستوى الثالث - جيوفيزياء - جيوفيزياء تطبيقية ٤ ٣١٧

Mansoura University
Faulty of Science
Department of Geology

Date: January 14, 2013
Final semester – Academic year 2012/2013
3rd Program Geophysics
Full Marks: 60 marks
Time allowed: 2 hrs

Final Exam in Subsurface Geology (~~G309~~) 317

Answer the following questions

Q1. Write in details on each of the following: (20 Marks)

a. Lithologic correlation. (7 Marks)

b. Data needed for subsurface evaluation. (7 Marks)

c. The main categories of geophysical exploration methods. (6 Marks)

Q2. Write on the applications of subsurface geology (20 Marks)

Q3. Give short notes on each of the following (20 Marks)

a. Drilling methods for subsurface data. (7 Marks)

b. Geochronologic correlation. (7 Marks)

c. Regional correlation. (6 Marks)

All the best

لجنة الامتحان والتصحيح:
أ.د./ محمد عابد أ.د. محمود الشربيني أ.د. عبدالقادر زلطة د./ غالب عيسى*

المستوى الثالث - جيوفيزيا - مبادئ الجيولوجيا الاقتصادية ج ٢١٥

Mansoura University
Faculty of Science
Geology Department

Date: 21-1-2013
Time : 2h

First Term Exam (January 2013)
Third Level (geophysic program)
Subject: G-315 (Economic Geology)
Total Marks: 60

Answer the following Questions:

Question One : (20 Degree)

(A) Give a suitable term for the following: 10 Degrees

1- Rocks and ores are slowly dissolved and metal of different composition is deposited.
2- Alteration products of primary ore minerals as a result of weathering processes.
3- Ore minerals formed at the same time of the surrounding rocks.
4- Refers to the least ratio of metal in the ore.
5- In certain period and certain region conditions were suitable to form mineral ores.

(B) Give examples of mineral depsoits in Egypt: 10 Degrees

1- Precambrian mineral deposit.
2- Miocene mineral deposits.
3- Pleitocene and Recent mineral deposits.
4- Early magmatic mineral depsoits.
5- Pegmatitic mineral deposits.

Question Two: (20 Degree)

(A) Mention only the processes of concentration of mineral deposits.
(B) Correlate between cavity filling deposits and metasomatic replacement deposits.
(C) Mention physical and chemical conditions during crystallization of magma.
(D) Causes of differentiation of magma.
(E) Factors affecting deposition of carbonates.

Question Three: (20 Degree)

(A) Causes of differentiation of magma.
(B) Correlate between residual mineral deposits and sedimentary mineral deposits.
(C) Paragenesis of minerals during sea water evaporation.
(D) Examples of phosphate and uranium minerals.
(E) Kinds of coal deposits.

مع أطيب الأمنيات بالنجاح .....

Exam Committee:*
Prof. Dr. Amin Gheith* Prof. Dr.Abdelkader Zalata Prof.Dr. Salah Ayad Dr. Shaban Mashal

المستوى الثالث - جيوفيزياء - جيولوجيا البترول ج ٢١٨

Mansoura University
Faulty of Science
Department of Geology
El Mansoura - Egypt

Date: January 17, 2013
Final semester – Academic year 2012/2013
3rd Program Geophysics
Full Marks: 80 marks
Time allowed: 2 hrs

Final Exam in Petroleum Geology (G318)

Answer the following questions

Q1. Write briefly on each of the following: **(30 Mark)**

a. The importance of groundwater for generating oil traps. **(10 Marks)**
b. Migration of Petroleum. **(10 Marks)**
c. Coated zones. **(10 Marks)**

Q2. Discuss the origin of petroleum. **(25 Mark)**

Q3. Write on the secondary stratigraphic traps . **(25 Mark)**

All the best

لجنة الامتحان والتصحيح:
أ.د./ محمد عابد أ.د. آدم الشحات أ.د. حمدي صيصة د./ غالب عيسى*

المستوى الثالث - جيوفيزياء - قليل مدى ٢٠١٣

جامعة المنصورة	امتحان دور يناير 2013	المادة: تحليل عددي
كلية العلوم	برنامج جيوفيزياء	الزمن: ساعتان.
قسم الرياضيات	المستوى الثالث	

Answer the following questions: [80 Marks]

Question 1 [27 Marks]

a) Show that the initial value problem:

$$y' = 1 + \frac{y}{t}, 1 \le t \le 2, y(1) = 2$$

has a unique solution, then use Euler's method with h = 0.5 to approximate it.

b) Develop a divided difference table for the following data, then approximate f (2.35) using the Newton backward divided difference formula:
f(2) = 1.40, f(2.1) = 1.45,
f(2.2) = 1.48, f(2.3) = 1.52,
f(2.4) = 1.55

Question 2 [26 Marks]

a) Approximate f(0.5) using the Lagrange interpolating polynomial and the data below:
f(1) = 0, f(-1) = -2, f(2) = 3

b) Use Simpson's rule to approximate:

$$\int_0^{(\pi/4)} \tan x \, dx$$

c) Approximate $\sqrt[3]{155}$ using Newton's method. Take the initial approximation to be 5.

Question 3 [27 Marks]

a) Use all appropriate formulas to approximate f ' (0.6) with the following data:

f(0.2) = 0.98, f(0.4) = 0.918,
f(0.6) = 0.808, f(0.8) = 0.639,
f(1.0) = 0.384

b) Solve the following system using the LU factorization:
$2x_1 + x_2 - 3x_3 = -1, -x_1 + 3x_2 + 2x_3 = 12,$
$3x_1 + x_2 - 3x_3 = 0$

With My Best Wishes, Dr. Samia Abou Awad.