
Answer FOUR questions only of the following (50M)

Q1 (12.5 M)

Define the following?

- i- Stratabound deposits
- ii- Gangue mineral
- iii- Black smokers
- iv- Oil shale

Q2 (12.5 M)

- i- Discuss the various mechanisms of the formation of gold deposits?
- ii- Compare between metasomatic and metamorphic mineral deposits?

Q3 (12.5 M)

- i- Mention the mode of occurrence and grades of coal deposits with illustration?
- ii- Discuss the formation of massive sulfide deposits and copper-nickel-sulfide association?

Q4 (12.5 M)

- i- Partial melting and fractional crystallization are two ways of separating some minerals from other. Comment?
- ii- Explain the meaning of geochemical traps in the formation of ore deposits?

Q5 (12.5 M)

- i- Write on the hydrothermal mineral deposits with examples?
- ii- Compare between placers deposits and residual mineral deposits with examples?

بسم الله الرحمن الرحيم

جامعة أسيوط

كلية العلوم - قسم الجيولوجيا

امتحان التحريرى للمستوى الرابع بكلية العلوم شعبة الجيولوجيا والكيمياء

المادة: خريطة مصر الجيولوجية (٤١٠ ج)

(Geologic Map of Egypt (410 G)

الزمن: ساعتان

الدرجة: ٥٠ درجة

الفصل الدراسي الصيفى ٢٠١٨/٢٠١٩ م

Answer the following questions:

First Question: (15 Marks)

1- Sketch in a geologic time table the subsurface stratigraphic sequence of the Cretaceous strata in north Western Desert.

2- Give reasons for *three only* of the following statements:

- The separation of Arabia Plate from Africa Plate.
- The economic and scientific important of Bahariya Formation.
- The occurrence of very thick Paleozoic sequences in the northern part of Western Desert.
- The important of Jurassic rocks in Egypt.

Second Question: (15 Marks)

1- In a geologic time table compare between the Eocene rock units at Nile Valley and Fayoum areas.

2- Write briefly an essay on the early Cretaceous rocks at Sinai Egypt, illustrating your answer by drawing.

Third Question: (20 Marks)

1- Discriminate by drawing between the Cenomanian sediments at north and south Sinai

2- Draw a stratigraphic column for the Upper Cretaceous rock units at Aswan.

3- Define the geologic age and the stratigraphic relationship for *three only* of the following rock units:

a- Qasib & Lakia

b- Tarawan & Esna

c- Kohla & Basur

d- Desouky & Dhiffah

Good Luck !

Prof. Dr. Nageh A. Obaidalla

Answer FOUR questions only of the following (50M)

Q1 (12.5 M)

Give short notes about the following:

- i- Kimberlites.
- ii- Epithermal deposits.
- iii- Black smokers.
- iv- Tailings.

Q2 (12.5 M)

- i- Explain the geology of PGE deposits?
- ii- Discuss the properties and common types of asbestos?

Q3 (12.5 M)

- i- Mention the various types of mineral deposit based on commodity?
- ii- Chemical weathering and erosion can concentrate minerals.
Comment?

Q4 (12.5 M)

- i- Write short note on the hydrothermal deposits above subduction zones?
- ii- What makes a mineral deposit economic to mine?

Q5 (12.5 M)

- i. Explain the formation of porphyry copper deposits?
- ii. Write on the placer deposits and placer mining?



Summer semester final examination

Subject: Course No. G433 (Geochemistry)

Students: B.Sc. Students (Geology and Geology-Chemistry)

Date: Aug., 05, 2019

الامتحان في صفتين

Part 1 (Geochemistry of hard rocks)

Answer Two questions only of the following (25 marks)

Q1 (12.5 marks) Compare between the following:

- i- *Siderophiles* and *chalcophiles*.
- ii- Alkali metals and alkaline earth metals.
- iii- Stable isotopes and non stable isotopes.
- iv- MORB basalts and OIB basalts.

Q2 (12.5 marks)

- i- Discuss the MORB major element geochemistry?
- ii- Igneous rocks can be alkalic (alkaline) or sub-alkalic, depending on the ratio of total alkalis to silica. Explain?

Q3 (12.5 marks)

- i- Write short note on the behavior of cobalt and nickel in magmatic and hydrothermal sulphides?
- ii- Discuss the importance of studying geochemistry?

أ.د. جلال الحباك

مع التمنيات بالتوفيق

الامتحان في صفتين (أنظر الصفحة الثانية)

Part II- Geochemistry of sedimentary rocks (25 marks)

Write only on Two from the following:

1.A- The effects of weathering on rocks is the breakdown of the fresh solid rock into an aggregates of loose material, some of which goes into solutions, another part subject to chemical change only, the third part still remains without change in composition. **Explain that with examples.** (7 marks)

1.B- Discuss the formation of laterites? (5.5 marks)

2- Write On:

A- Kerogen maceral groups and kerogen types. (4.5 marks)

B-The characteristics of Achondrites and Stony-iron meteorites. (4 marks)

C- Formation of resistates. (4 marks)

3- Discuss briefly:

A- The effect of moderate and intense chemical weathering on granitic rocks (4 marks)

B- Factors affecting preservation of organic matter in sedimentary rocks. (4.5 marks)

C- The Formation of precipitates (4 marks)

الامتحان في صفتين (انتهت الأسئلة)

Good Luck - *Pro.Dr. Mamdouh Farrag Soliman*