



TANTA UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF GEOLOGY

EXAMINATION OF SECOND LEVEL GEOPHYSICS STUDENTS

COURSE TITLE:	SEISMIC METHODS (1)		COURSE CODE: GP2202
DATE:	17 JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 150
			TIME ALLOWED: 2 HOURS

Answer of the following questions (illustrate your answers with clear drawings):

Question (1): (30 Marks)

Explain the time-distance curve in case of refraction methods in two horizontal layers.

Question (2): (30 Marks)

Write short note on:-

- The hidden and blind layer problems.
- 2D and 3D shooting.
- Types of seismic waves.
- Lead time.

Question (3): (30 Marks)

- Compare between the advantages and disadvantages of seismic methods.
- Write shortly on the seismic data acquisition in land.

Question (4): (30 Marks)

Discuss the following:-

- Types of shooting operation.
- Huygens' Principle.
- Delay time.
- Shear Modulus.


Question (5): (30 Marks)

In case of refraction methods

- How to determine the dip angle and the vertical thicknesses of inclined beds.
- Mention the different ways for determines the depth in two horizontal layers.

EXAMINERS	PROF. MOHAMED ATAF NWEAR	DR. ALI SOLIMAN ALI
	DR. MOATAZ KHAIRY BARAKAT	DR. KHALED ABD ELLAH

C. Bahariya

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SECOND YEAR STUDENTS OF GEOLOGY			
	COURSE TITLE	IGNEOUS PETROLOGY		COURSE CODE:2204
DATE:	17 June, 2017	Summer course	TOTAL ASSESSMENT MARKS :100	TIME ALLOWED:2 HOURS

Answer the following questions:

1-Discriminate between

- b- Constituents of magma and chemical classification of magma----- (12 marks)
- c- Fractional crystallization and equilibrium melting------(6 marks)
- d- Equilibrium and fractional crystallization of basaltic magma------(10 marks)
- e- -Crystal-liquid differentiation of magma and magmatic assimilation------(16 marks)
- f- Mafic and felsic minerals of igneous rocks------(6 marks)

2-Write short notes on the following illustrating your answer with diagrams whenever is possible:


- a- Equigranular textures ------(15 marks)
- b- Ophitic and subophitic textures ------(5 marks)
- c- IUGS Classification for volcanic rocks (using Q-A-P triangle)----- -(15 marks)
- d- IUGS classification of ultramafic rocks----- -(15 marks)

Best wishes

Examiners:

Prof. Gaafar El Bahariya
Dr. Ismail Thabet

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR LEVEL TWO STUDENTS (CHEMISTRY- GEOLOGY)			
	COURSE TITLE	IGNEOUS PETROLOGY (1)		COURSE CODE:GE2204
DATE:	MAY 2017	SEMESTER: TWO	TOTAL ASSESSMENT MARKS :100	TIME ALLOWED:120 min

Part 1 (50 marks)

1- Put \checkmark or \times marks and correct the wrong ones: - *(25 marks)*

- (a) Quartz formed at early stage of magmatic crystallization at high temperature.
- (b) Flourine, chlorine, water found at high temperature in early stage of crystallization and concentrated in dunite and perdotite.
- (c) Olivine and quartz constitute the essential minerals in Harzburgite.
- (d) Magma mixing takes place between magma and country rocks to give xenoliths.
- (e) Alkali pyroxenes as aegirine occur in intermediate rocks whereas the calcic pyroxenes as augite found in monzogranites.
- (f) Plutonic rocks have anhedral crystal, small grain size and amorphous groundmass.
- (g) Dunite composed mainly of alkali feldspar and olivine
- (h) The essential minerals in syenite are mainly quartz, albite and mica
- (i) Felsic magma are low viscosity, rich in silica and occur as low elevation mountains in the field
- (j) Calcic plagioclase crystallized at intermediate pressure and temperature in late stage of crystallization with microcline and orthoclase.

2- Discuss the magmatic crystallization and formation of different varieties of igneous rocks based on Bowen's reaction series. *(15 marks)*

3- Discuss the magmatic assimilation between basic magma and limestone, basic magma and sandstone, give some examples. *(10 marks)*

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Part 2 (50 marks)

II. Write short notes on the following, illustrate your answer with diagrams whenever is possible:

1. Nomenclature of Gabbroic rocks using IUGS classification.
2. The IUGS classification of pyroclastic rocks.
3. The IUGS classification of granitic rocks.

4. Write on the following:

Websterite, Aplite, Obsidian, Harzburgite, Porphyry, Spilite, Pegmatite,

Lherzolite


Examiner: Prof. Mohamed Metwaly Abu Anbar

Examiner: Dr. Ahmed ELSaed Masoud

Good Luck

TANTA UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF GEOLOGY

EXAMINATION FOR SECOND LEVEL STUDENTS OF SPECIAL GEOLOGY


	COURSE TITLE:	ROCK FORMING MINERALS	COURSE CODE: GE2202
	DATE:	14/ 06/ 2017	TOTAL ASSESSMENT MARKS: 100

WRITE SHORT NOTES ON THE FOLLOWINGS:

- 1- Leucite – silica phase diagram. (12 marks)
- 2- The minerals of biotite group and the following optical properties (colour, cleavage, habit and optic figure). (13 marks)
- 3- Classification of the orthopyroxenes and the optical properties of two of them. (13 marks)
- 4- The stability diagram of silica. (12 marks)
- 5- The main optical properties of: daphnite- pargasite-fuchsite. (12 marks)
- 6- The differences between amphibole and pyroxene. (12 marks)
- 7- The forsterite-fayalite phase diagram. Illustrate the subdivisions of the olivine group. (13 marks)
- 8- The alkali amphibole minerals. (13 marks)

Examiners:	Prof. Samir M. Aly	Prof. Hassan Z. Haraz
	Prof. Ibrahim A. Salem	Prof. Gaafar A. El Bahriya

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 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR FRESHMEN (SECOND LEVEL) STUDENTS OF GEOPHYSICS		
COURSE TITLE:	Mineralogy and petrology		COURSE CODE:GE 2222
DATE:	14 JUNE, 2017	SUMMER COURSE	TOTAL ASSESSMENT MARKS: 150 TIME ALLOWED: 2 HOURS

Part I: Mineralogy (75 marks)

1-Discriminate between the followings:

- a- The structure of sheet silicate and ino-silicates------(15 marks)
- b- Chemical composition and classification of olivine group and feldspar group------(15 marks)
- c- The chemical classification and stability fields of silica polymorphs -----(15 marks)
- d- The general optical properties of amphibole group and pyroxene group------(15 marks)
- e- The general optical properties of mica group and feldspar group------(15 marks)

Part II: Petrology

1-Write short notes on (30 marks):

- a- Mafic and felsic minerals of igneous rocks------(6 marks)
- b- Textures of volcanic igneous rocks in hand specimens------(8 marks)
- c- Concordant intrusive igneous bodies------(6 marks)
- d- Classification of igneous rocks based on mineral composition (mineralogy).....-(10 marks)

2- Compare between (15 marks):

- a- Chemical weathering and mechanical weathering
- b- Graded bedding and cross bedding structures

3- Complete the following sentences (9 marks)

- a-is the limit at which metamorphism has begun and diagenesis has at low temperature, whereas the upper limit of metamorphism is characterized by.....
- b- Sources of temperature of metamorphism-----,,-----,-----
- c- Uniform pressure is, whereas directed pressure is.....


4- Write short notes (21 marks)

- a- Dynamic metamorphism
- b- Prograde and retrograde metamorphism
- c- Foliated textures in metamorphic rocks

Best wishes

Examiners: Prof: Gaafar El Bahariya Dr. Ismail Thabet

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SECOND LEVEL STUDENTS OF CHEMICAL/GEOLOGY			
	COURSE TITLE	Rock-forming Minerals		COURSE CODE: GE 2202
DATE:	14 June 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS :100	TIME ALLOWED:2 HOURS

Answer the following questions, illustrating your answers with diagrams if it possible:

1-Write short notes on the following:


- a -Chemical composition and mineral classification of mica group and amphibole group------(16 marks)
- b- Polymorphs of silica and their stability fields------(15 marks)
- c- Mineral classification of olivine group and feldspar group------(15 marks)

2-Discriminate between the following:

- a-Sheet silicate structure and inosilicate structure------(10 marks)
- c- General optical characteristics of amphibole and pyroxene group-----12 marks)
- d- Optical properties of mica group and feldspar group------(12 marks)
- e- General chemical formula of pyroxene group and feldspar group------(10 marks)
- f- Optical properties of olivine mineral and garnet mineral------(10 marks)

Best wishes

Examiner: Prof. Gaafar El Bahariya

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR (LEVEL 2) SPECIAL GEOLOGY & CHEMISTRY/GEOLOGY			
1969	COURSE TITLE:	Macropaleontology I	CODE: GE 2212	
DATE:	JUNE, 2017	SEMESTER: 2	TOTAL MARKS:100	TIME ALLOWED: 2 HOURS

Answer the following questions (Illustrate your answer with drawing):

Question 1:

(25 Marks)

Altered remains include those fossils which have undergone changes in structure and composition, Discuss briefly the different **types of altered fossil remains.**

Question 2:

(25 Marks)

Discuss briefly the Belemnites morphology

Question 3:

(25 Marks)

Describe the types of the following bivalve morphological features:

a- Beak b- Ligament c- Pallial line d- Muscle scars

Question 4:

(25 Marks)

Write briefly about:

a- General characters, ecology and habitat of Gastropods.

b- Nautiloidea suture pattern.

Best wishes

Examiners	Prof. Dr. Hamza Khalil	Prof. Dr. A. Marzouk
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