	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR (LEVEL 2) PETROLIUM & MINING PROGRAM			
	COURSE TITLE:	Stratigraphy		CODE: PMGE
DATE:	MAY, 2018	SEMESTER: 2	TOTAL MARKS:100	TIME ALLOWED: 2 HOURS

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

Question 1:

(25 Marks)

Define and discuss:

- a- The law of faunal succession.
- b- Inclusion principle
- c- Angular unconformity

Question 2:

(25 Marks)

Write briefly on:

- a- Permian–Triassic extinction event.
- b- Four (4 only) physical evidence of correlation.
- c- Zombie effect.

Question 3:

(25 Marks)

a- What are the factors that control the dispersal and distribution of species of marine invertebrate organisms (Barriers to Dispersal)?

b- Discuss briefly the biostratigraphic Problems

Question 4:

(25 Marks)

Define and briefly discuss the following stratigraphic units:

- 1- Formation 2- Age and Stage 3- Total range zone 4- Abundance zone

Best wishes

Examiners	Prof. Dr. H. Khalil	Prof. Dr. A. Zalat
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DATE: MAY 2015	SEMESTER: 2	TOTAL MARKS: 100	TIME ALLOWED: 2 HOURS
COURSE TITLE: METEOROLOGY	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		

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Answer the following questions (write your answer with drawing)

(25 Marks)

Question 1:

Define and discuss:

- a- The law of faunal succession
- b- Inclusion principle
- c- Angular unconformity

(25 Marks)

Question 2:

Write briefly on:

- a- Permian-Triassic extinction event.
- b- Four (4 only) physical evidence of continental drift.
- c- Zondic effect.

(25 Marks)

Question 3:

- a- What are the factors that control the dispersal and distribution of species of marine invertebrate organisms (Factors in Diversity)?
- b- Discuss briefly the biogeographic patterns.

(25 Marks)

Question 4:

Define and briefly discuss the following stratigraphic units:

- 1- Formation
- 2- Age and Stage
- 3- Total range zone
- 4- Abundance zone

Best wishes

Examiners	Prof. Dr. H. Khalil	Prof. Dr. A. Zalat
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TANTA UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF GEOLOGY

FINAL EXAMINATION FOR SECOND LEVEL STUDENTS OF GEOPHYSICS

COURSE TITLE:	PALAEOMAGNETIC METHODS		COURSE CODE:GP2210
DATE:	4 JUNE 2018	TERM: SECOND	TOTAL ASSESSMENT MARKS:150
			TIME ALLOWED: 2 HOURS

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

Question 1: Write about the following:

- a) *Magnetic Domains.* (20degree)
- b) *Theory of alternating-field demagnetization.* (20 degree)
- c) *Geological application of paleomagnetism.* (20 degree)

Question 2: Differentiate between the following

(40 degree)

- a) *Magnetic anisotropy meters and Low-field susceptibility meters.*
- b) *Types of Secondary remnant magnetization.*
- c) *Fields of paleomagnetism.*

Question 3: Discuss: -

(30 degree)

- a) *Magnetic susceptibility and its anisotropy.*
- b) *Paleomagnetic sampling.*
- c) *The Konigsberger ratio for rocks.*

Question 4: Define the following:

(20 degree)

- 1) *Absolute magnetic permeability.*
- 2) *The fold test.*
- 3) *Sun compass.*
- 4) *Depositional remnant magnetization.*

Good Luck

EXAMINERS	Prof.:ABDELAZIZ L. ABDELDAYEM	Prof.: SHADIA T. ELKHODARY
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EXAMINATION FOR SOPHOMORES (SECOND YEAR) STUDENTS OF GEOLOGY

COURSE TITLE:	GEOGRAPHIC INFORMATION SYSTEM (SPECIAL COURSE-1)		COURSE CODE: GE2224
DATE:	4 JUNE, 2018	SEMESTER: SECOND	TOTAL ASSESSMENT MARKS: 50 TIME ALLOWED: 2 HOURS

Answer the following Questions (using drawing when it possible)

1- Discuss the following: - (20 Marks)

- a. The applications of the raster based surface analysis. (10 Marks)
- b. Stages of spatial data handling. (10 Marks)

2- Compare between: - (15 Marks)

- a. Conformal and equal-area map projections. (5 Marks)
- b. Direct and indirect spatial data capture. (5 Marks)
- c. User-controlled and automatic classification techniques. (5 Marks)

3- Complete the following sentences: - (7.5 Marks)

- a. Coordinate systems can be distinguished into two types and
- b. Network analytic functions are used to
- c. Metadata is defined as
- d. Neighbourhood functions such as,,
- e. There are no particular GIS software packages better than others; this depends on factors such as and

4- Check the following sentences by wright (√) or wrong (x) signs and correct the wrong one. (7.5 Marks)

- a. Buffer zone generation is one of the best known overlay functions. ()
- b. The Geoid is used as a reference to describe heights. ()
- c. Connectivity functions work on the basis of networks. ()
- d. The Universal Transverse Mercator (UTM) is one of the most important map projections used worldwide. ()
- e. The measurement functions can be applied on vector and raster data. ()

EXAMINERS	Prof. Alaa A. MASOUD	Prof. Samir Z. KAMH
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☺ Good Luck ☺

- 5- The hind coxa dividing the first abdominal sternum this is the most distinctive character of
- 6- - The hind legs of Dytiscidae are..... , while most Orthoptera have hind-legs.
- 7- Suborder :Anoplura is commonly known as....., Mallophaga have mouthparts.
- 8-The ovipositor is modified into..... in Hymenoptera.
- 9-Pterygote insects are, but wingless condition in this subclass is
- 10-The mouthparts of order Lepidoptera are.....type while Order: Coleoptera is characterized withmouthpart .

2-Indicate whether the following statements are true or false without correction the false one(Total:10 marks,1 mark each) :


- 1- Exopterygota meaning Pterygota with incomplete metamorphosis().`
- 2--Family: curculionidae :(weevils) are characterized by their distinctive long snout and filiform antennae().
- 3- The adult of suborder: Cyclorrhapha (Diptera) have Stylate antennae()
- 4- The human flea is the potent vector of Plague ().
- 5-Both sexes of mosquitoes are blood sucking()
- 6-Subclass: Apteriygota include Diplura, Collembola and Thysanura().
- 7-Cockroaces have a pair of segmented cerci at the end of abdomen ().
- 8-Suborder Brachycera (Diptera) contain vectors of diseases().
- 9-Suborder Symphyta (Hymenoptera) have a broad junction between thorax and abdomen().
- 10-Metamorphosis of Orthoptera is gradual()

3-Give the scientific meaning for the following (Total 10 Marks, 2 each)

- 1- Entognatha 2- Halters. 3-Hamuli. 4- Tympana. 5-Petiol.

"Best Wishes"

Examiners : Prof. Dr. Elsaied Naiem Prof.Dr. Samer Ezzat Dr. Noha Daboor

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR FRESHMEN (SECOND LEVEL) STUDENTS OF GEOPHYSICS		
1969	COURSE TITLE:	Mineralogy and petrology	COURSE CODE:GE 2222
DATE:	MAY, 2018	SUMMER COURSE	TOTAL ASSESSMENT MARKS: 150 TIME ALLOWED: 2 HOURS

Part I: Mineralogy

1-Discriminate between the followings:

- a- The structure of orthosilicate silicate and ino-silicates------(15 marks)
- b- Chemical composition and classification of pyroxene and feldspar groups------(15 marks)
- c- Stability fields of polymorphs minerals of silica (SiO₂)------(15 marks)
- d- The general optical properties of mica group and amphibole group------(15 marks)
- e- The optical properties of the following minerals:
Garnet, olivine, chlorite, plagioclase, calcite------(15 marks)

Part II: Petrology

1-Write short notes on the following

(30 marks):

- a- Mafic and felsic minerals of igneous rocks------(6 marks)
- b- Equigranular textures and interstitial textures of igneous rocks------(10 marks)
- c- Concordant intrusive igneous bodies------(8 marks)
- d- Constituents of magma ------(6 marks)

2- write briefly on:

- a- clastic sedimentary rocks------(10 marks)
- b- Chemical weathering and mechanical weathering------(5 marks)

4- Discriminate between:

- a- Characteristic minerals of low grade and high grade metamorphism------(10 marks)
- b- Textures of thermal metamorphism and textures of dynamic metamorphism------(10 marks)
- c- Classification of foliated rocks and non-foliated rocks based on textures------(10 marks)

Best wishes

Examiners: Prof: Gaafar El Bahariya

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION For The Second Level of Chemistry-Geology Students			
	COURSE TITLE	Metamorphic Petrology (1)		COURSE CODE
DATE:	21/5/ 2018	SEMESTER: TWO	TOTAL ASSESSMENT MARKS :100	TIME ALLOWED: 2 hrs.

Part I (50 marks)

Answer the following questions. Illustrate your answer, whenever possible.

1. What are the main sources of temperature, pressure and chemical fluids which are essential for metamorphism. (15 marks)
2. Write a concise article on main factors recognizing the different kinds of metamorphism, giving rise to rock examples for each type. (25 marks)
3. Tick TRUE or FALSE of the following statements, and CORRECT the false one. (10 marks)
 - a. All metamorphic rocks display foliated textures; this is due to dynamic metamorphism.
 - b. Schist is relevant to dynamic metamorphism.
 - c. Slate represents the earliest mechanism of metamorphic differentiation.
 - d. Granulose texture is related to shock metamorphism.
 - e. The main products of shale after regional metamorphism are slate and amphibolites.

Part 2 (50 Marks)

4. Mark √ or × and correct the wrong ones:- (25 marks)

- a. Blue schist facies is characterized by presence of antigorite and garnet
- b. Phyllonite is a rock variety formed at low grade of metamorphism due to thermal metamorphism.
- c. Granulite facies is characterized by low pressure and temperature and formed in subduction zone at low pressure, temperature and depth around 3 kb.
- d. Potash feldspar and garnet occur in high grade metamorphic rocks, whereas Serpentinites mainly composed of chlorite and feldspar, formed in shear zone due to low pressure deformation (3 marks)
- e. Anatexis occur at high temperature and pressure due to ultra-metamorphism in green schist facies
- f. Omphacite is a variety of amphiboles and occur in hornfels facies and characterized of migmatites.
- g. Porphyroclasts are formed due to regional metamorphism whereas Augen texture is characterized for rocks formed due to auto metamorphism
- h. Quartzite is metamorphic rock formed after ultrabasic rocks at high pressure
- i. Pyroxene hornfels facies is formed due to dynamic metamorphism due to pressure and formed at low temperature.
- j. Megma is formed due to metamorphism at low temperature and pressure (epidote-Pumpellite facies)

5- Define the following:


(25 Marks)

- a. Augen texture, b- mylonites, c- Eclogite facies giving example , d- migmatites and their textures, e- Thermal metamorphism giving example of different type of facies.

Examiners: Prof. Mohamed Tharwat Heikal	Prof. Mohamed Metwaly Abu Anbar
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Wishing Success for the ALL

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 1959	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	THEORETICAL EXAM. IN GEOPHYSICS FOR 2NDLEVEL STUDENTS, SPECIALGEOPHYSICS		
COURSE TITLE:	" GRAVITY METHODS -2 "		COURSE CODE: GP2204
DATE:	21/5/2018	TERM: SECOND	TOTALASSESSMENT MARKS:100
			TIME : 2 HOR

ANSWER THE FOLLOWING QUESTIONS:

Marks : 100

1-Write about ONLY TWO from the followings:

40

A- The grid spacing design in gravity surveying.

B- The marine Gravity survey.

C- Qualitative interpretation of residual gravity map.


2- Write about the Second Vertical Derivative Method for potential anomaly separation.

30

3- Explain the role of Gravity method as a technique in oil and mineral exploration .

30

EXAMINER: PROF.DR. / MOHAMED REFAAT SOLIMAN

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION OF SECOND LEVEL GEOPHYSICS STUDENTS		
COURSE TITLE:	SEISMIC METHODS (1)		COURSE CODE: GP 2202
DATE:	19 MAY, 2018	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)

In case of refraction methods, how to determine the dip angle and the vertical thicknesses of inclined beds.

Question (2): (30 Marks)

- A. Compare between the advantages and disadvantages of seismic methods.
- B. Mention the different ways to determine the depth in two horizontal layers.

Question (3): (30 Marks)

Discuss the following:-

- a. Huygens' Principle.
- b. Delay time.
- c. Types of seismic waves.

Question (4): (30 Marks)


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

Question (5): (30 Marks)

Write short note on:-

- a. The hidden and blind layer problems.
- b. 1D, 2D and 3D shooting.
- c. Lead time.

EXAMINERS	PROF. MOHAMED ATAF NWEAR	DR. ALI SOLIMAN ALI
	PROF. AHMED EL SHISTAWY	DR. MOATAZ BARAKAT

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR LEVEL TWO STUDENTS (CHEMISTRY- GEOLOGY)			
	COURSE TITLE	IGNEOUS PETROLOGY (I)		COURSE CODE:GE2204
DATE:	MAY 2018	SEMESTER: TWO	TOTAL ASSESSMENT MARKS :100	TIME ALLOWED:120 min

Part 1 (50 marks)

1- Discuss the magmatic crystallization and formation of different varieties of igneous rocks based on Bowen's reaction series. (20 marks)

2- Discuss the magmatic assimilation between acidic magma and basic rocks and limestone, give some examples. (10 marks)

3- Put \sqrt or \times marks and correct the wrong ones: - (20 marks)

- (a) Troctolite composed mainly of alkali feldspar and olivine
- (b) Quartz formed at early stage of magmatic crystallization at high temperature.
- (c) Alkali pyroxenes as aegirine occur in basic rocks whereas the calcic pyroxenes as augite found in monzogranites.
- (d) Plutoic rocks have anhedral crystal, small grain size and amorphous groundmass.
- (e) Flourine, chlorine, water found at high temperature in early stage of crystallization and concentrated in dunite and peridotite.
- (f) Magma mixing takes place between magma and country rocks to give xenoliths.
- (g) Olivine and quartz constitute the essential minerals in ultrabasic rocks.

Part 2 (50 marks)


II. Write short notes on the following, illustrate your answer with diagrams whenever is possible: (50 marks)

1. IUGS classification of Granitic rocks using Q-A-P diagram.
2. Nomenclature of Ultramafic rocks by using Ol, Opx and Cpx.
3. Chemical classification of Igneous rocks
4. Nomenclature of Gabbroic rocks using IUGS classification
5. Discuss the following:
 - a) Spilite and Pegmatite.
 - b) The differences between andesite porphyry and porphyritic andesite.
 - c) Feldspathoid does not plot with Quartz in QAPF diagram.

Examiner: Prof. Mohamed Metwaly Abu Anbar

Examiner: Dr. Ahmed Ismail

Good Luck

 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAM FOR SECOND LEVEL OF SPECIAL GEOLOGY AND GEOPHYSICS STUDENTS		
COURSE TITLE:	LITHOSTRATIGRAPHY		COURSE CODE: GE2208
DATE:	30 MAY, 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100
		TIME ALLOWED: 2 HOURS	

Answer the following questions.

I- Complete the following sentences: (20 marks)

- 1- Lithostratigraphy is
- 2- Stratotype is
- 3- The type locality of Mit Ghamr Formation is and Sidi Salem Formation is
- 4- Isochore map refers to thickness, whereas isopach map refers to thickness.
- 5- Type area is

II- Discuss the lithostratigraphic units of the following. (30 marks)

- a- The new discovery **Zohr** gas-field in Egypt.
- b- Jurassic rocks in north Western Desert.
- c- Nubia sandstones in the Gulf of Suez.

III- Compare between the following with drawing: (30 marks)

- a- Columnar section and stratigraphic cross section.
- b- Member and flow with giving examples.
- c- Formation and complex with giving examples.

IV- Write in details about **ONE** only of the following. (20 marks)

- a- Lithostratigraphy of the Baharyia Oasis.
- b- Lithostratigraphy of the Eocene rocks in Fayum area.

EXAMINERS	PROF. H.M. KHALIL DR. M.S. FATHY	WITH BEST REGARDS
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