	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SECOND LEVEL STUDENTS OF (GEOLOGY) - (GEOPHYSICS) - (GEOLOGY-CHEMISTRY)		
	COURSE TITLE:	MICROPALAEONTOLOGY (1)	COURSE CODE: GE 2109
DATE:	JANUAR, 2016	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100 TIME ALLOWED: 2 HOURS

1) Write short notes on Five of the following questions. Illustrate your answers with clear drawings and give examples:

- A. Mixed chambers arrangement of test. (Five only) (10 Marks)
- B. Shape of the apertures in Foraminifera (Five only) (10 Marks)
- C. Mode of coiling in foraminifera (10 Marks)
- D. Sutures in Foraminifera. (10 Marks)
- E. Dimorphism in Foraminifera. (10 Marks)
- F. Application of Foraminifera (10 Marks)

2) Give Examples: (15 Marks)

- A. Biumbonate test.
- B. Surface ornamentation.
- C. Lobulate periphery.

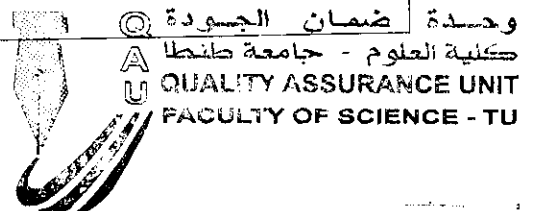
3) Explain in details the factors controlling the distribution of foraminifera. (20 Marks)

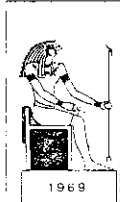
4) Choose the correct answer of the following questions: (15 Marks)

1. Microfossils are generally excellent indicators of  
a) Tectonics      b) Earthquake      c) paleoecology      d) Paleogeography
- Foraminifera is  
a) Unicellular animal    b) Unicellular plant    c) Multicellular animal    d) Multicellular plant
3. Agglutinated foraminiferal test is formed of  
a) Calcareous wall    b) Siliceous wall    c) Chitineous Walls    d) coarse/fine cemented particles
4. Porcelaneous foraminiferal test is:  
a) Perforate      b) semiperforate      c) imperforate      d) non-perforate
5. Unilocular foraminiferal test is  
a) septate      b) non septate      c) simply septate      d) limbate

*Best wishes*

Examiners	Prof. Mahmoud Faris Mohamed	Prof. Abdelfattah Ali Zalat
	Prof. Akmal Marzouk	





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DEPARTMENT OF GEOLOGY

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EXAMINATION FOR LEVEL TWO STUDENTS OF PETROLEUM AND MINING GEOLOGY PROGRAM

1969	COURSE TITLE:	STRUCTURAL GEOLOGY		COURSE CODE: PMGP 2103
DATE:	27 DEC., 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 180	TIME ALLOWED: 2 HOURS

I- Complete the following:-

(30 marks)

- 1- The hinge point coincides on the trough point in case of:.....
- 2- The orientation of a planar structure is measured in terms of: ..... and .....
- 3- Non-plunging fold has horizontal ..... and vertical .....
- 4- Folds are considered to be open, if they display interlimb angles ranging from:.....
- 5- The trend of North Sinai Fold Belt is: .....
- 6- ..... mode of foliation that occurs in certain metamorphic rocks as a consequence of the parallel alignment of platy and lath-shaped mineral constituents.
- 7- Disjunctive foliation includes (a)..... (b)..... (c)..... (d).....
- 8- ..... highly deformed and fine-grained rock containing more than 90 percent matrix and less than 10 percent relict grains.
- 9- ..... joints that share a similar orientation in same area.
- 10- When erosion removes most of the overlying thrust block, leaving only island-like remnants resting on the lower block, the remnants are called .....


II- Put (✓) in front of the correct phrase and (X) in front of the wrong phrase with error correction. (15 marks)

- 1- A listric fault in which the fault plane is curved and the dip of the fault plane becomes shallower with increased depth..... ( )
- 2- The heave of the fault is the vertical component of the dip separation ..... ( )
- 3- Continuous foliation cut all the rock and the fabric elements are homogeneously distributed, to the scale of grain individual minerals..... ( )
- 4- Cleavage is a secondary fabric element, formed under low-temperature conditions. that imparts to the rock a tendency to split along planes..... ( )
- 5- Flats are regions on thrust faults where stratigraphy is truncated at relatively steep angles..... ( )



وحدة ضمان الجودة  
كلية العلوم - جامعة طنطا  
QUALITY ASSURANCE UNIT  
FACULTY OF SCIENCE - TU

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR SECOND YEAR STUDENTS OF GEOPHYSICS			
COURSE TITLE	OPTICAL MINERALOGY		COURSE CODE: GE 2105	
DATE:	JANURY 2018	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 -Two methods of light polarization------(10 marks)
- b- Mechanism of interference figure formation------(10 marks)
- c- Anisotropic minerals------(10 marks)
- d- Interference colours and their orders in anisotropic mnerals------(10 marks)

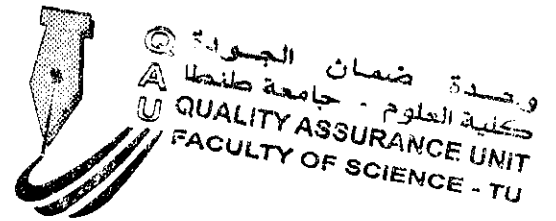
**2-Discriminate between the following:**

- a- Interference figures of uniaxial and biaxial minerals----- (10 marks)
- b- Twinkling and pleochroism----- (8 marks)
- c- Retardation and birefringnce------(6 marks)
- e- Extinction and twinning in anisotropic minerals----- --(10 marks)


Best wishes

**Examiner:**

Prof. Gaafar A El Bahariya



← امتحان

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	EXAMINATION FOR GRADE TWO STUDENTS OF GEOPHYSICS			
	COURSE TITLE:	Radioactivity and Geothermometry	COURSE CODE: GP2109	
DATE:	3 JAN, 2018	SEMESTER: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

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

**Part I: Radioactivity** (60 Minutes, Total Marks 50)

1) Describe the difference between: (20marks)

- Geiger- Muller Counter and Scintillometer.
- Nuclear forces.

2) Write on the unites of radioactivity measurements. (10marks)

3) How are radiometric data displayed? (10marks)

4) Illustrate the ground radiometric method for survey. (10marks)

**Part II: Geothermometry** (60 Minutes, Total Marks 50)

1- Explain the following

a) The differences in geothermal gradient between continental craton, continental rift and remnant subduction zone. (10 marks)

b) Vertically from continental crust to the core some zones are liquid and others are solid. (10 marks)

c) Tectonic setting affecting the depth of partial melting zone in the continental areas. (10 marks)

2- Discuss the thermal system of the lakes and oceans. (10 marks)


3- Define the followings: - (10 marks)

- Geothermal reservoir
- Heat and temperature
- Heat capacity

EXAMINERS	PROF. SHADIA T. ELKHODARY	PROF. ZENHOM E. SALEM
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وحدة ضمان الجودة  
كلية العلوم - جامعة طنطا  
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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR GRADE TWO STUDENTS OF GEOPHYSICS		
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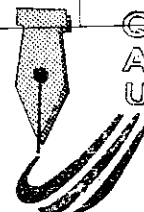
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EXAMINERS PROF. SHADIA T. ELKHODARY

PROF. ZENHOM E. SALEM



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TANTA UNIVERSITY  
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DEPARTMENT OF GEOLOGY  
**Petroleum & Mining Geology Program (PMGP)**



**Progress Test (PMGE2107) For The Second Level of PMGP Students**

	COURSE TITLE	Micropaleontology	COURSE CODE: <b>PMGE2107</b>
DATE: 6/1/2018	SEMESTER: One	180 Marks	TIME ALLOWED: 2 Hrs

**Answer the following questions. Illustrate your answers with clear drawings and give examples:**

- 1) Explain the main morphological characters of Diatom frustule with examples? (25 Marks)
- 2) Explain the types of hinge structure in Ostracoda carapace? (25 Marks)
- 3) Position of Apertures in Foraminifera (Five ONLY). (25 Marks)
- 4) Mixed arrangements in Foraminifera. (25 Marks)
- 5) Central structure of Calcareous Nannofossils (25 Marks)
- 6) Give Examples: (25 Marks)

- A-Lobulate periphery      B-Ribs ornamentations      C-Involute coiling  
D-Triserial arrangement in Foraminifera      E-Biumbonate test in Foraminifera

7) Choose the correct answer of the following questions: (30 Marks)

**1. Microfossils are generally excellent indicators of**

- a) Tectonics      b) Earthquake      c) paleoecology      d) Paleogeography

**2. The wall of calcareous algae is .....**

- a) Siliceous      b) phosphatic      c) chitinous      d) organic

**3. The earliest raphid pennate diatoms appear**

- a) Cretaceous      b) Paleocene      c) Middle Eocene      d) Middle Miocene

**4. The wall of ostracods carapace is**

- a) Siliceous      b) calcareous      c) chitinous      d) organic

**5. Ostracods are one of the most diverse groups of**

- a) Arenaceous fauna      b) crustaceans      c) chordate fauna

**6. The valves of ostracoda are closed by**

- a) Ligament      b) adductor muscles      c) spines      d) pore canal

**7. Freshwater ostracods carapace tend to be**

- a) Heavily calcified,      b) weakly silicified      c) weakly calcified      d) moderately silicified

**8. The earliest recorded well preserved diatoms are**

- a) Raphide pennaes      b) centric forms      c) Monoraphide pennaes

**9. Merodont hinge is characterized by having**

- a) No terminal teeth      b) terminal teeth in one valve only      c) terminal teeth in both valves

**10) The dominant morphological features in pennate diatoms are**

- a) Raphe slit      b) central area      c) radial striae      d) flat rounded valve face

Examiners	Prof. Mahmoud Faris Mohamed	Prof. Abdelfattah Ali Zalot
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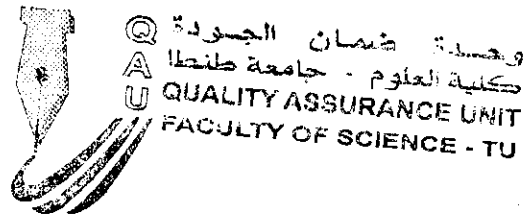
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TANTA UNIVERSITY FACULTY OF SCIENCE				
DEPARTMENT OF GEOLOGY				
EXAMINATION FOR SECOND LEVEL STUDENTS OF SPECIAL GEOLOGY				
COURSE TITLE:	Final Exam of Gemstones			COURSE CODE: GE2111
DATE:	JAN. 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS


Answer the following questions: (50 Marks)

- 1- Write short article on composition ,classification and geological record of amber.
- 2- Write short article on physical properties, origin and treatment of turquoise.
- 3- Physical properties and gem varieties of tourmaline.
- 4- Physical properties and origin of diamond.
- 5- Write briefly on the following: (40 Marks)
  - a- Chemical classification of gemstones.
  - b- Colour and varieties of topaz.
  - c- Jet organic stone.
  - d- Major varieties of crystalline silica .
  - e- Physical properties of lapis lazuli and enhancement of jade.
- 6- Complete the following sentences: (10 Marks)
  - a-Gem varieties of beryl are.....
  - b-Gemstones are often treated with.....
  - c-Metamictization zircon is characterized by.....
  - d-Gemstones which are opaque are cut as.....,whereas gems which are transparent are cut as.....
  - e- Varieties of the aluminium spinels nclude .....

Examiner: Prof. Ibrahim Salem



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عبد العزيز ك. محمد

 1969	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SOPHOMORES (SECOND YEAR) STUDENTS		
COURSE TITLE:	PRINCIPLES OF STRATIGRAPHY	COURSE CODE: GE2107	
DATE:	16 JAN., 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100
			TIME ALLOWED: 2 HOURS

Answer the following questions.

I- Complete the following sentences:

(20 marks)

- 1- Stratigraphy is .....
- 2- Lithostratigraphy is .....
- 3- The periods of Cenozoic era are ....., .....
- 4- Non-conformable surface separates between..... and .....
- 5- The present is the key .....

II- Discuss in details with drawing the conformable boundaries.

(20 marks)

III- Explain the following principles with drawing:

(30 marks)

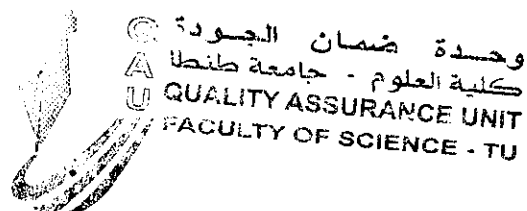
- a- Principle original horizontality.
- b- The law of superposition.
- c- Principle of Cross-Cutting Relationships.
- d- Walther's Law of Facies Succession.

IV- Write notes about the followings with drawing:


(30 marks)

- a- Strata and stratification.
- b- Outcrop stratigraphic procedures.

EXAMINERS	PROF. H.M. KHALIL DR. M.S. FATHY	WITH BEST REGARDS
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	TANTA UNIVERSITY- Faculty of Science -Department of Physics			
	EXAM FOR LEVEL TWO STUDENTS OF BIO- AND GEOPHYSICS			
	COURSE TITLE	Electromagnetism 1		COURSE CODE: 2184
DATE:	- 1 - 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

**First Question:**

- I) The three vertices of regular tetrahedron are located at O (0, 0, 0), A (0, 1, 0), B ( $0.5\sqrt{3}$ , 0.5, 0), and C ( $\frac{\sqrt{3}}{6}$ , 0.5,  $\sqrt{2/3}$ ). **Find**, [10marks]
- a) A unit vector perpendicular (outward) to face ABC;  
b) The area of face ABC.
- II) **Define**: Coulomb's law, potential difference, potential at a point, Faraday's law. [15marks]

**Second Question:**

- I) Point charges of 50nC each are located at A (1, 0, 0), B (-1, 0, 0), C (0, 1, 0) and D (0, -1, 0) in free space. **Find** [15marks]
- a) The electric field at point P (0, 0, 1).  
b) The electric potential at point P (0, 0, 1).
- II) **Deduce** the electric field of near infinite charged conducting sheet having a uniform electric density  $\rho_s$  C/m<sup>2</sup>. If a second infinite sheet charged conducting sheet, having a negative charge density  $-\rho_s$  C/m<sup>2</sup>, is located at distance  $x = a$  from the first, **find the total** field in the region inside and outside the two conducting sheets. [10marks]

**Third Question:**

- I) Using gauss's law, **find** the electric field ( $\vec{E}$ ) of a point charge (Q), and then find the potential difference between two points A and B around the point charge. [10marks]
- II) **State** first Maxwell Equation. [10marks]
- III) **Find** the divergence of electric field density ( $\vec{\nabla} \cdot \vec{D}$ ) in the region about a point charge (Q) located at the origin. [10marks]

**Fourth Question:**

- I) **Find** the required electric work (W) to move electric charge (Q) between two points A and B in a uniform electric field (E). [10marks]
- II) **Prove** that the electric field vector equals exactly the gradient of electric potential ( $E = -\nabla V$ ). [10marks]

EXAMINER	DR. REDA EL-SHATER
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