	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF PHYSICS			
	EXAMINATION FOR FRESHMEN (FIRST LEVEL) STUDENTS OF PETROLEUM & MINING GEOLOGY PROGRAM (PMGP) (SEMESTER 1) طلاب المستوى الأول، شعبة بترول وتعدين (الترم الأول)			
	COURSE TITLE:	PROPERTIES OF MATTER AND MAGNETISM خواص مادة ومغناطيسية		COURSE CODE: PHYS1101
DATE: 28	DECEMBER, 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 180	TIME ALLOWED: 2 HOURS

First question:

{45 Marks}

- Define shortly the following:
mass, volume, density, Gravity Acceleration and what are their units in SI?
- What are the four basic properties of units?
- car is traveling at a speed of 38.0 m/s. Convert the units of m/s to mph 9. (mile/h).

Second question:

{45 Marks}

- What are the tasks of dimensional analysis?
- Explain shortly Newton's law of gravitation.
- Consider a projectile of mass m , leaving the surface of a planet of mass M with escape speed v . Define the escape velocity and deduce its equation.

Third question:

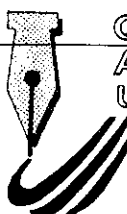
{45 Marks}


- Deduce : the velocity and the acceleration of SHM then give the general equation of (Simple Harmonic Motion) SHM and the force law of SHM which is called sometimes Hooke's law.
- Define : An elastic body - Types of Deformations of Solids – Stress – Strain – Young's modulus.
- Define: the atomic number (Z) - the atomic mass number (A)- stable and unstable isotopes, and give examples of some isotopes.

Fourth question:

{45 Marks}

- Write down the possible decay equations of uranium, thorium and rubidium radioactive isotopes to lead or strontium isotopes.
- B- State the equation of the magnetic force exerted by a magnetic field B on a test charge q moving with velocity v making an angle θ with the direction of B . Then deduce the equation of B in terms of this force.
- State the equations of: 1-The force on a wire of length ℓ carrying a current I and
2- the torque exerted on a current loop of area A placed in a magnetic field B .

Examiners	Prof. Talaat M. Meaz		الجودة Prof. Samia A. Saafan. 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 Sophomores (First Year) students OF GEOLOGY			
1969	COURSE TITLE:	Historical Geology		COURSE CODE: GE1103
DATE:	24 DECEMBER, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: TWO HOURS

Historical Geology (Part I): (1 hour)

1- Put ✓ or × marks and correct the wrong ones:- (22 marks)

- 1-Stony Meteorites is similar to the core of the earth
- 2-The Oceans and continents are fixed during geologic time and there is no change in the surface of earth
- 3-The absolute age determined by using trilobites.
- 4-The Precambrian Era classified into Paleozoic, Mesozoic and Cenozoic.
- 5-Arabian-Nubian shield occur in America and related to Alpine Orogeny at 400 Ma
- 6-The relative age is used for interpret the relation between the sun and the earth
- 7-The Hadean Era began at 2600 to 1300Ma and occurred in Owinat

2-Answer the following questions- (28 marks)

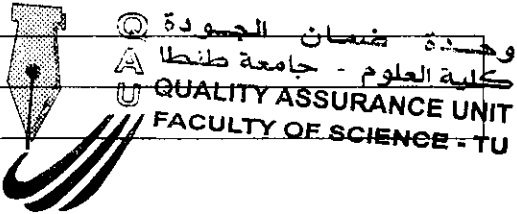
- 1 - Give some examples of some orogencis in the world
- 2-- Define the New-Proterozoic Era, age, classification and occurrences in Egypt and the World
- 3 -Write on Classification of Proterozoic Era and occurrences in the world and in Egypt
- 4- Write on methods for absolute age determination

(Part II) : (1 hour, 50 marks)

Answer Four only of the following questions

- 1) Describe the origin of life in the Proterozoic Eons? (12.5 marks)
- 2) Explain the common life in the Triassic/Jurassic Periods? (12.5 marks)
- 3) Discuss the evolution of vertebrates in the Paleozoic and Mesozoic Eras? (12.5 marks)
- 4) The bases of delineation boundary between the periods with examples? (12.5 marks)

With Good Luck

Examiners	Prof. Mohamed Abu Anbar	
	Prof. Abdelfattah Ali Zalat	

I. READ THE PASSAGE AND ANSWER THE QUESTIONS:

(30 MARKS)

(P1) At 8.45 on the morning of 15 April 136 BC, Babylon was plunged into darkness when the Moon passed in front of the Sun. An astrologer, who recorded the details, wrote: 'At 24 degrees after sunrise - a solar eclipse. When it began, Venus, Mercury and the normal stars were visible. Jupiter and Mars, which were in their period of disappearance, became visible. The Sun threw off the shadow from southwest to northeast.' There is no reason to doubt this ancient account of a total eclipse. But when the present-day astronomers used a computer to run the movements of the Earth, Moon and Sun backwards from (*their*) present positions, like a movie in reverse; (*they*) found something very odd. The total eclipse of 15 April 136 BC should not have been visible from Babylon at all. The zone of totality should have passed over the Spanish island of Mallorca, 48.8 degrees west of Babylon - a difference of more than one-eighth of a complete rotation of the Earth, or 3.25 hours.

(P2) How can this be? The only explanation is that the planet's rotation has slowed since 136 BC, making the day longer. Of course, there are many other records of the ancients observing cosmic events, but the value of these sightings to modern science is limited. Reports of eclipses, however, are in a class of their own. If the Earth has accumulated a change in rotation equivalent to an eighth of a turn in just over 2000 years, then we can infer that the day has lengthened by an average of a few milliseconds a century.

(P3) This is an extraordinarily precise figure to deduce from historical records. Richard Stephenson of the University of Durham and Leslie Morrison, formerly of the Royal Greenwich Observatory in Cambridge, are using the sightings in a long-term project to discern subtle changes in the Earth's spin. 'Such records are the only way known to us at present of measuring the actual change in the rotation of the Earth over the course of recorded history,' says Stephenson. Stephenson and Morrison have so far accumulated about 300 eclipse reports, lunar and solar, stretching back as far as 700 BC.

1. According to the passage, what happened in Babylon? When? Why?
2. What happened in Babylon affected planets other than the earth, explain how?
3. How did today's scientists react to what happened? What did they find out?
4. According to the author, what is the difference between the observed and computed information?
5. According to the passage, in paragraph 1, lines 6 and 7, what do the pronouns (their and they) refer to?
6. What evidence did the ancient eclipse reports give?
7. In paragraph 2, the author says "the value of these sightings to modern science is limited". What does the author mean?
8. According to the author, what is the main idea in paragraph 2?
9. According to the passage, what is the purpose of the project mentioned in paragraph 3?
10. In English, explain the meanings of the underlined words?

2. GRAMMAR AND VOCABULARY: ANSWER THE FOLLOWING QUESTIONS AS IS REQUIRED. (20 MARKS)

1. It was an difficult question, I could not answer it. (Fill in the blank with an Adverb)
2. Mag had helped me to finish the homework. (Turn into Passive Voice)
3. Lily wants to leave the house forever. (Turn into Emphatic Statement)



Final Exam For The First Level of PMGP Students

COURSE TITLE: English for Petroleum & Mining Geology 1 COURSE CODE: UN 1101

DATE: SEMESTER: ONE Total Assessment: 60 marks TIME ALLOWED: 2 hrs

1. READ THE PASSAGE AND ANSWER THE QUESTIONS:

(20 MARKS)

(P1) At 8.45 on the morning of 15 April 136 BC, Babylon was **plunged into** darkness when the Moon passed in front of the Sun. An astrologer, who **recorded** the details, wrote: 'At 24 degrees after sunrise - a solar eclipse. When it began, Venus, Mercury and the normal stars were **visible**. Jupiter and Mars, which were in their period of **disappearance**, became visible. The Sun **threw off** the shadow from southwest to northeast.' There is no reason to doubt this ancient account of a total eclipse. But when the present-day astronomers used a computer to run the movements of the Earth, Moon and Sun backwards from (their) present positions, like a movie in reverse; (they) found something very **odd**. The total eclipse of 15 April 136 BC should not have been **visible** from Babylon at all. The zone of totality should have **passed over** the Spanish island of Mallorca, 48.8 degrees west of Babylon - a difference of more than one-eighth of a complete rotation of the Earth, or 3.25 hours.

(P2) How can this be? The only explanation is that the planet's **rotation** has slowed since 136 BC, making the day longer. Of course, there are many other records of the ancients observing **cosmic** events, but the value of these sightings to modern science is limited. Reports of eclipses, however, are in a class of their own. If the Earth has accumulated a change in rotation equivalent to an eighth of a turn in just over 2000 years, then we can **infer** that the day has lengthened by an average of a few milliseconds a century.

(P3) This is an **extraordinarily** precise figure to deduce from historical records. Richard Stephenson of the University of Durham and Leslie Morrison, formerly of the Royal Greenwich Observatory in Cambridge, are using the sightings in a long-term project to discern **subtle** changes in the Earth's spin. 'Such records are the only way known to us at present of measuring the actual change in the rotation of the Earth over the course of recorded history,' says Stephenson. Stephenson and Morrison have so far accumulated about 300 eclipse reports, **lunar** and **solar**, stretching back as far as 700 BC.

1. According to the passage, what happened in Babylon? When? Why?
2. What happened in Babylon affected planets other than the earth, explain how?
3. How did today's scientists react to what happened? What did they find out?
4. According to the author, what is the difference between the observed and computed information?
5. According to the passage, in paragraph 1, lines 6 and 7, what do the pronouns (**their and they**) refer to?
6. What evidence did the ancient eclipse reports give?
7. In paragraph 2, the author says "**the value of these sightings to modern science is limited**". What does the author mean?
8. According to the author, what is the main idea in paragraph 2?
9. According to the passage, what is the purpose of the project mentioned in paragraph 3?
10. In English, explain the meanings of the **Underlined Bold** words?

1. READ THE PASSAGE AND ANSWER THE QUESTIONS:

(30 MARKS)

(P1) What is tiny, trisexual and lives on the lips of lobsters? "That's got to be a joke," I thought. Maybe lobster jokes are the latest thing on the internet? But, no, it's real and it's called 'Symbian Pandora', a minute creature that was only discovered in 1995. I get such a thrill when the miraculous pops up as reality before our very eyes, when the marvelous turns out to be a weed species right under my nose in the kitchen garden.

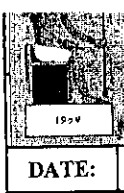
(P2) Why do we forget that the world is far more complex than we can imagine? Why do we want the laws of nature to be straightforward? (We) stubbornly say, "There's bound to be a simple answer." But there isn't. The natural world is complicated. Maybe it is complexity that we are afraid of? Or, perhaps we try to preserve our singularity to counter-balance the plurality of the universe? Or maybe, we still secretly believe that people are the crown of creation and the world was made for our enjoyment? The idea of Pandora living out its life on the lips of a lobster shocks us back to reality and our humble place in the cosmos.

(P3) Recently, some biology students made an astounding discovery on a field study that involved picking up 'anything interesting'. The yellow, finger-like fungus growing out of the backs of some beetle grubs looked disgusting. It had consumed so much of each grub that immediate identification was impossible. The students took it to a laboratory, studied it thoroughly, asked the right questions and soon realized that they had found a form of Cordyceps subsessilis, a mould that produces cyclosporine, an immunosuppressant used to combat organ rejection in transplants! It's not the finding of a new organism that makes the story outstanding. To discover means to uncover or change our view of something. As it turns out, you often need to change the viewer to make a discovery. People prefer the comfort of the familiar and resist changes which might expose them to the unknown. Discovery is the sense of wonder. You are a discoverer if you manage to keep a sense of surprise lifelong.

1. In paragraph 1, how does the author feel about *Symbion Pandora*? Why?
2. What does the author compare with a weed species? Why?
3. According to the passage, what is the main idea in paragraph 2?
4. In paragraph 2, line 2, who does the pronoun (*We*) refer to?
5. According to the author, why do people tend to explain things in a simple way?
6. In paragraph 3, what were the steps that led to making the discovery?
7. According to the passage, what is mean by a discovery? Why do only a few people become discoverers?
8. According to the author, what makes discoverers different from other people?
9. In paragraph 3, the author says "People prefer the comfort of the familiar and resist changes which might expose them to the unknown", what does the author want to say?
10. In English, explain the meaning of the underlined words?

2. GRAMMAR AND VOCABULARY: ANSWER THE FOLLOWING QUESTIONS AS IS REQUIRED. (20 MARKS)

1. It was an difficult question, I could not answer it. (Fill in the blank with an Adverb)
2. Mag had helped me to finish the homework. (Turn into Passive Voice)
3. Lily wants to leave the house forever. (Turn into Emphatic Statement)
4. (a new car) (In a sentence, use the noun given as an Indirect Object)

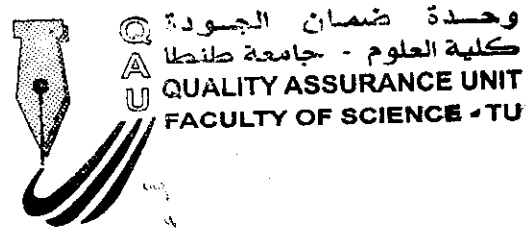


COURSE TITLE:	PHYSICAL GEOLOGY (1)	COURSE CODE: GE 1101
DATE:	31 / 21 / 2017	TOTAL ASSESSMENT MARKS: 100
		TIME ALLOWED: 2 HOURS

Write on the following, illustrating with drawing if it possible:

- 1- Distinct layers of the atmosphere surrounding the Earth..... (6marks)
- 2- Compare between the internal layers of the Earth in respect to composition, depth, property and density..... (10 marks)
- 3- Characteristics and geologic events of different forms of divergent and convergent plate boundaries with examples.....(14 marks)
- 4- Major features of ocean basins and write in details on **TWO** of them..... (10 marks)
- 5- Rock cycle, illustrate your answer with a sketch.....(8 marks)
- 6- Physical weathering and its important factors.....(7 marks)
- 7- Constructive role of rivers(7 marks)
- 8- Depositional forms of winds.....(9 marks)
- 9- Components of volcanic products.....(9 marks)
- 10- Select only **FOUR** of the following and compare between.....(20 marks)
 - a- Stony meteorites and iron meteorites.
 - b- Youth and old age stages of the normal cycle of river erosion.
 - c- Orogenic and epeirogenic movements.
 - d- Primary and secondary earthquake waves.
 - e- Euogeosyncline and miogeosyncline.

EXAMINER: Prof. Mahmoud H. Ashmawy





Answer the following questions:

- 1-(a) Write the main components of computer and give examples
(b) Write the factors affecting the **performance** of computer
(c) What are the main functions of **Operating System**?
(d) Write the steps necessary to create a new folder on desktop
(e) How to control the display of different opening windows?

2- Define each of the following:

- (a) The **Recycle Bin**
(b) The **Clipboard**
(c) The statistical function **STDEV** (Standard deviation)
(d) The statistical function **MEDIAN**
(e) The statistical function **CORREL**

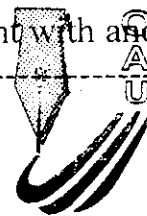
3- Write the steps necessary to do the following:


- a) To create a Table in Word program
b) Three different methods to copy a text in Word program
c) To insert any function in Excel program
d) To create a long numerical series in Excel program

4-Rewrite and complete the following statements:

- a) To create a an equation in Excel we start by writing the----- sign
b) In Excel program ,to draw a Chart for dependant and independent variables we must choose the ----- Chart type
c) The extension of a Word document is -----while the extension of Template document is -----
d) To replace a repetitively word in Word Document with another word we do the following steps-----

Best Wishes



	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF PHYSICS			
	EXAMINATION OF GENERAL PHYSICS (FIRST YEAR) STUDENTS OF PHYSICS			
	COURSE TITLE:	GENERAL PHYSICS		COURSE CODE: 1125
DATE:	3-1-2018	TERM: 1	TOTAL ASSESSMENT MARKS:150	TIME ALLOWED :2HOURS

1-Choose the correct answer(45)

1. Neglecting air resistance, the escape speed from a certain planet for an empty space vehicle is 1.12×10^4 m/s. What is the corresponding escape speed for the fully loaded vehicle, which has triple the mass of the empty one?
 A. 3.73×10^3 m/s B. 1.12×10^4 m/s C. 3.36×10^4 m/s D. 9.98×10^4 m/s
 E. 1.40×10^{12} m/s².

2. Let M denote the mass of Earth and let R denote its radius. The ratio g/G at Earth's surface is: A. R^2/M B. M/R^2 C. MR^2 D. M/R E. R/M

3. The mass of an object:

- A. is slightly different at different locations on Earth B. is a vector
 C. is independent of the acceleration due to gravity
 D. is the same for all objects of the same size and shape
 E. can be measured directly and accurately on a spring scale

4. An object at the surface of Earth (at a distance R from the center of Earth) weighs 90 N. Its weight at a distance 3R from the center of Earth is: A. 10N B. 30N
 C. 90N D. 270N E. 810N

5. The escape speed at the surface of Earth is approximately 8 km/s. What is the mass, in units of Earth's mass, of a planet with twice the radius of Earth for which the escape speed is twice that for Earth? A. 2 B. 4 C. 8 D. 1/2 E. 1/4



6. A spherical shell has inner radius R_1 , outer radius R_2 , and mass M, distributed uniformly throughout the shell. The magnitude of the gravitational force exerted on the shell by a point mass particle of m, located a distance d from the center, inside the inner radius, is: A. 0 B. GMm/R^2 C. GMm/d^2 D. $GMm/(R^2 - d^2)$ E. $GMm/(R_1 - d)^2$

7. A planet is in circular orbit around the Sun. Its distance from the Sun is four times the average distance of Earth from the Sun. The period of this planet, in Earth years, is: A. 4 B. 8 C. 16 D. 64 E. 2.52

8. To obtain the absolute pressure from the gauge pressure: A. subtract atmospheric pressure B. add atmospheric pressure C. subtract 273 D. add 273

9. Several cans of different sizes and shapes are all filled with the same liquid to the same depth. Then: A. the weight of the liquid is the same for all cans

- B. the force of the liquid on the bottom of each can is the same
 C. the least pressure is at the bottom of the can with the largest bottom area
 D. the greatest pressure is at the bottom of the can with the largest bottom area
 E. the pressure on the bottom of each can is the same



	TANTA UNIVERSITY, FACULTY OF SCIENCE			
	EXAMINATION FOR SOPHOMERS (LEVEL ONE) STUDENTS OF BIOTECHNOLOGY			
	COURSE TITLE	Scientific English	Course Code: ENG	
	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS	

I- Read the Following Passage and Answer the Questions: (20 marks)

Sameera Moussa (March 3, 1917-August 5, 1952) was an Egyptian nuclear scientist who held a doctorate in atomic radiation and worked to make the medical use of nuclear technology affordable to all. She organized the Atomic Energy for Peace Conference and sponsored a call for setting an international conference under the banner "Atoms for Peace". Sameera Moussa was born in Egypt in Gharbia Governorate in 1917. Her mother went through a fierce battle against cancer. After her mother's death, her father moved with his daughter Sameera to Cairo and invested his money in a small hotel in the El-Hussein region. At the insistence of her father, Sameera attended Kaser El-Shok Primary School, one of the oldest schools in Cairo. After she completed her primary education, she joined the Banat El-Ashraf School, which was built and managed by Nabawya Moussa, the famous political activist. Despite the fact that Sameera got high grades in her secondary education, she insisted on joining the Faculty of Sciences at Cairo University. In 1939, Sameera Moussa obtained a B.Sc. in radiology with First Class Honours after researching the effects of X-ray radiation on various materials. Dr. Moustafa Mousharafa, the first dean of the faculty, believed in his student enough to help her become a remarkable lecturer at the faculty. Afterwards, she became the first Assistant Professor at the same faculty and the first woman to hold a university post, being the first to obtain a Ph.D. degree in atomic radiation.

Sameera Moussa believed in "Atoms for Peace" and said "I'll make nuclear treatment as available and as cheap as Aspirin". She worked hard for this purpose and throughout her intensive research, she came up with a historic equation that would help break the atoms of cheap metals such as copper, paving the way for a cheap nuclear bomb. She organized the Atomic Energy for Peace Conference, where many prominent scientists were invited. The conference made a number of recommendations for setting up a committee to protect against nuclear hazards, for which she strongly advocated. Sameera also volunteered to help treat cancer patients at various hospitals especially since her mother went through a fierce battle against this disease. Sameera Moussa received a scholarship from the Fulbright Atomic Program in order to be acquainted with the modern research facilities at California University. In recognition of her pioneering nuclear research, she was given permission to visit the secret US atomic facilities. The visit raised vehement debate in the United States Academic and Scientific circles since Sameera was the first "alien" to have access to such facilities. She turned down several offers that required her to live in the United States and to be granted the American citizenship saying "Egypt, my dear homeland, is waiting for me".

- 1-Who was Sameera Moussa?
- 2-What was the cause of her mother's death?
- 3-Why did she insist on joining the Faculty of Sciences at Cairo University?
- 4-What did Dr. Moustafa Mousharafa do for her?
- 5-Explain Sameera Moussa's contributions to "Atoms for peace" conference.
- 6-What were the most important recommendations of the conference?
- 7-Why did Sameera Moussa volunteer to help treat cancer patients at various hospitals?
- 8-Why did Sameera Moussa receive a scholarship from the Fulbright Atomic Program?

		Tanta University, Faculty of Science, Department of Botany		
Final Examination for (First Year) Students of Geology				
COURSE TITLE: General Botany (1)		COURSE CODE: BO1121		
DATE: 2 JANUARY, 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS	

A. With labeled drawings (when possible), write on Five of the following (60 Marks, 12 Marks each)

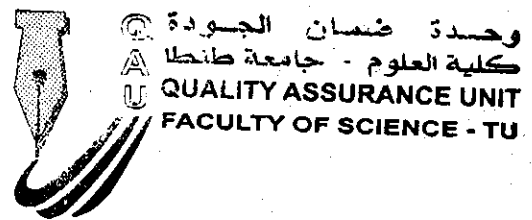
1. Different types of adventitious roots.
2. Heterophylly
3. Stem modifications
4. Lobed leaves
5. Mitochondria and Plastids
6. Characteristics and classification of meristems

B. Mark each sentences with true (√) or false (X), and correct the false ones (20 Marks, 2 Marks each)

1. The main function of leafy stem is photosynthesis ()
2. Connection between neighboring cells occur via pits ()
3. The main components of the nucleolus are RNA and proteins ()
4. Increase in plant length occurs by the activity of lateral buds ()
5. Cellulose is the main component in collenchyma cells ()
6. Rhizome is a stem lying above soil surface with fibrous roots and buds at each node ()
7. Dwarf stems are characterized by its nodes and internodes ()
8. Acicular leaves have a reticulate venation ()
9. Insectivorous leaves catch insects to get food and water ()
10. Reniform leaves ends with an acute apex ()

C. Define each of the following (20 Marks, 4 Marks each)

1. Perennation
2. Secondary meristems
3. Floral components
4. Heterophylly
5. Clones



Best wishes.....

Examiner:

Dr. Khalil Saad Allah

