

Answer the following questions:

(Illustrate your answers with drawing whenever possible)

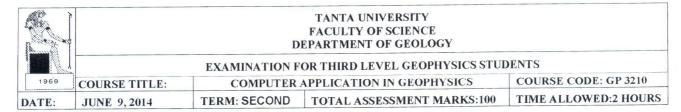
1) Write in detail on the following: (50 marks)

| a) Induced and remanent magnetism. | (10 marks) |
|--|------------|
| b) Evidences supporting field reversals. | (10 marks) |
| d) Presentation of magnetostratigraphic data. | (15 marks) |
| e) Nomenclature of the Pliocene magnetostratigraphy. | (15 marks) |

- 2) Write an account on the construction and evolution of the Geomagnetic Polarity
 Time Scale (GPTS). (25 marks)
- 3) Discuss possible uses and applications of magnetostratigraphy, give an example from Egypt. (25 marks)

Good Luck!

| EXAMINERS | PROF. ABDELAZIZ L. ABDELDAYEM | PROF. SHADIA T. EL-KHODARY |
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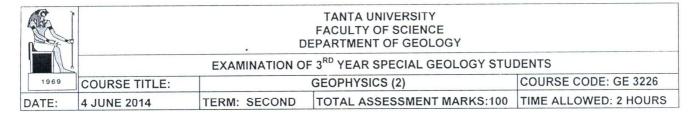
Answer of the following questions:-

- 1. Explain the uses of computer in potential data processing.
- 2. Write about the application of computer in mining geophysics.
- 3. The role of computer in revealing and modeling subsurface structures.
- 4. Discuss each of the following?
 - a. The Software Counterfeiting.
 - b. Software for Workgroups.
 - c. Software for Small Business.
- 5. Fill in the blanks in the following sentences:-
- 6. Mention the uses and functions of the following.
 - a. Desktop Publishing.
 - b. Electronic Spreadsheets.
 - c. Word Processing.
 - d. Database Management.
 - e. Computer Art.

| EXAMINERS PROF. DR. MOH | HAMED REFAAT SOLIMAN | DR. MOATAZ KHAIRY BARAKAT |
|-------------------------|----------------------|---------------------------|

| | TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY | | | | | |
|------|---|--------------|----------------------------|-----------------------|--|--|
| | EXAMINATION FOR (THIRD YEAR) STUDENTS OF GEOPHYSICS | | | | | |
| 1969 | COURSE TITLE: [NTERPRETATION OF GRAVITY POTENTIAL COURSE CODE: 3204 | | | | | |
| DATE | MAY , 2014 | TERM: SECOND | TOTAL ASSESSMENT MARKS 100 | T!ME ALLOWED: 2 HOURS | | |

- 1) Write a short essay on the two methods Direct and Standard curves for the quantitative interpretation of the gravity anomalies of the different geological structures
- 2) The gravity vector direction on the earth can be analyzed into the x, y and z directions. Write the different notations used and their derivatives also the meaning of each notation.
- 3) The derivative of the gravity anomaly (the first and the second) of horizontal and vertical anomaly are very important for interpretation of different structures. Draw how theses curves are used for identification of subsurface different structures
- 4) Write on the mathematical solution of the 2 circles method



(I) Radioactive Method

Answer the following questions:

(1) Enumerate and describe the following:

| (A) Sources of Radioactivity. | ¥ | (10 marks) |
|---|---|------------|
| (B) <u>Two</u> types of Spectrometers. | | (10 marks) |
| (C) Nuclear forces. | | (10 marks) |
| (2) Describe the radioactive decay processes. | | (10 marks) |
| (3) Illustrate the radioactive minerals. | | (10 marks) |

(II) Seismic Methods

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

Question (1):

A) Discuss the following:-

(25 marks)

- Types of seismic waves.
- Fermat's principle and Snell's Law.
- Rigidity modulus.
- Seismic wave velocity in sedimentary rocks.
- T^2 - X^2 curve.

Question (2):

- Write a short essay about the use of seismic refraction shooting to estimate the depth to a refracting interface separating two horizontal media. (25 marks)

| EXAMINERS | PROF:MOHAMED K. SALAH | PROF: SHADIA T. ELKHODARY |
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| | EXAMINATION FOR JUNIOR (THIRD YEAR) STUDENTS OF GEOPHYSICS | | | | |
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| 1969 | COURSE TITLE: ELECTROMAGNETIC METHODS (2) | | | COURSE CODE: GP3206 | |
| DATE: | 4/6/ 2014 | TERM: SECOND | TOTAL ASSESSMENT MARKS: 100 | TIME ALLOWED: 2 HOURS | |
| | | | | | |

| Answe | r the | fol | lowing | aues | tions: |
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|-----------------|--|-----------|----|
| 1. Explain in o | details the electromagnetic induction process. | (20 marks | .) |
| 2. Write briefl | y about the following: | (20 marks | () |
| b. Amper's | of electromagnetic techniques and surveys. s right hand rule. pth. magnetic waves. | | |
| 3. Write abou | t the ground penetrating radar (GPR) system and its applications. | | |
| | | (20 marks | 5) |
| 4. Discuss th | e following: | (20 marks | 5) |
| a. Factors | s affecting the conductivity of a medium. | | |
| b. Factors | s affecting the depth of penetration of the EM wave. | | |
| 5. Read well | each statement and mark either ($\sqrt[N]{}$) if correct or (X) if wrong: | (20 marks | s) |
| a. The de | pth of penetration increases with increasing the frequency. | (| |
| b. The tin | ne domain electromagnetic surveys can reach to 1000 m. | (|) |
| c. The ma | agnetic component is in vertical plane in EM waves. | (|) |
| d. Electro | magnetic waves can exist without a medium. | (|) |
| e. TDEM | technique makes measurements as a function of time. | (|) |
| f. The VL | F transmitting signals are in the band from 15 to 25 MHz. | (|) |
| g. The re | ceivers in EM techniques measure the secondary fields only. | (|) |
| h. The sh | ielded GPR antenna contains transmitter and receiver in one unit. | (|) |
| i. The Inte | erpretation of the VLF-EM technique is generally qualitative. | (|) |
| j. Slingrai | n, is a fixed source Frequency Domain Electromagnetic. | (|) |
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| EXAMINERS | PROF. AHMED ANTAR NIGM | | |
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TANTA UNIVERSITY FACULTY OF SCIENCE



DATE:

DEPARTMENT OF GEOLOGY

| | EXAMINATION FOR THIRD LEVEL STUDENTS OF GEOPHYSICS | | | | | |
|---|--|---|----------|-----------------------|-----------------------|--|
| - | COURSE TITLE: | | Final Ex | am of Geology of Ores | COURSE CODE: GE3212 | |
| | JUNE. 2014 | TERM: SECOND TOTAL ASSESSMENT MARKS:100 | | | TIME ALLOWED: 2 HOURS | |

Part One: Write briefly on the following, Illustrate your answer with drawing. (50 marks)

- 1- Cavity filling deposits
- 2- Complex pegmatites.
- 3- Relation of contact metasomatism to intrusions and invaded rocks
- 4- Types of wall rock alteration
- 5- Origin of graphite, talc and criteria of replacement.
- 6- Classifcation of mineral deposits in Egypt according to Hilmy and Hussein, 1978.

Part Two: Answer The Following Questions. (50 marks)

- A) Write briefly on the following:
- 1- Define the process of residual and mechanical concentration describing by drawing only the different types of both residual and mechanical concentrations.
- 2- What is the difference between:
 - a) Barite and pyrite.
- b) Cooperite and cuperite.
- c) Manganite and magnetite. d) Gypsite and gibbsite.
- 3- Write on the following; illustrating your answer with drawing if it possible:
 - a) Salt dome.
- b) Oxidation of supergene enrichment.
- c) Cycle of phosphorus. d) Calcium sulphate deposition.

Examiners:

Prof. Ibrahim Salem

Prof. Bothina Eldsoky

TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY EXAMINATION FOR THIRD LEVEL STUDENTS OF GEOLOGY COURSE TITLE: Final Exam of Geology of Ores COURSE CODE: GE3212 DATE: JUNE. 2014 TERM: SECOND TOTAL ASSESSMENT MARKS:100 TIME ALLOWED: 2 HOURS

Part One: Write briefly on the following, Illustrate your answer with drawing. (50 marks)

- 1- Cavity filling deposits
- 2- Complex pegmatites.
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- 4- Types of wall rock alteration
- 5- Origin of graphite, talc and criteria of replacement.
- 6- Classification of mineral deposits in Egypt according to Hilmy and Hussein, 1978.

Part Two: Answer The Following Questions. (50 marks)

- 1) Distinguish between weathering and depositional methods of the formation of economic mineral deposits.
- 2) Uranium ore minerals? And mention the different categories of uranium deposits.
- 3) Morphology and zoning of supergene enrichment.
- 4) Different forms and types of laterite-type bauxite deposit.
- 5) Define: (a) Placer mineral deposits; (b) Laterite mineral deposits;(c) Fossil placer

Examiners:

Prof. Ibrahim Salem

Prof. Hassan Haraz