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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SENIORS STUDENTS OF GEOLOGY		
COURSE TITLE:	WELL LOGGING		COURSE CODE: GP4101
DATE:	JANUARY, 2016	SEMESTER: FIRST	TOTAL ASSESSMENT MARKS: 150
			TIME ALLOWED: 2 HOURS

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

1) Compare between the followings: (30 Marks)

- a- The designs of Laterolog-7 and Laterolog-8 devices.
- b- Normal and Lateral types of conventional electric tool.
- c- Electrode arrangements of Microlaterog and Proximity log measurements.

2) Give reasons on the followings: (30Marks)

- a- Fishing is important in petroleum production.
- B- Trubo technique is better drilling operation than rotary one.

4) Write short notes on: (45 Marks)

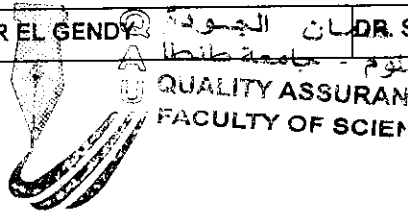
- a- Presentation of SP on the log.
- b- Mono-porosity crossplots .
- c- Determination of shale volume $V_{sh}\%$ using graphical method.

3) Complete the followings: (15 Marks)


- a- Laminar shale the porosity or permeability of the formation but dispersed shale in pores markedly, of the formation.
- b- The porosity can be determined from the resistivity logs using the following equation.....
.....
- c- Applications of caliper log are.....

4) Explain the principles of measurements, uses and limitations of Neutron, Density and Gamma ray Tools (30 Marks)

EXAMINERS	PROF. DR.NADER EL GENDY	د. شادية عبد الرحيم م. ساد DR. SHADIA ABD EL REHIM M. SAAD
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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR 4 TH LEVEL STUDENTS - GEOPHYSICS		
COURSE TITLE:	RESERVOIR CORRELATION & PRODUCTION	CODE NO. 4107	
DATE : JANUARY, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

- 1- Discuss the following subjects: (20 marks)
 - a) Importance of casing in petroleum production.
 - b) Dissolved gas derive mechanism.

- 2- Write on the following items: (40 marks)
 - c) Effect of hydrocarbons on the resistivity log responses.
 - d) Extract primary structures from logs.
 - e) Identification of the reservoir rocks.
 - f) Arrow plot pattern.

- 3- Write short notes on the meaning of: facies types, facies models and facies migration. (10 marks)


- 4- Explain how to perform a Facies analysis. (10 marks)

- 5- What are the basis of correlation and what types of data are used for correlation? (10 marks)

- 6- Discuss briefly the delta depositional systems? (10 marks)

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY			
	SEISMIC STRATIGRAPHY			
1999	COURSE TITLE:	SEISMIC STRATIGRAPHY	COURSE CODE: GP4105	
DATE:	10 JANUARY, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 2 HOURS

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I- Complete the following sentences. (15 marks)

- The four major groups of systematic reflections which distinguished on seismic sections are
- The four features that help to describe the reflection character of a seismic loop are
- Depositional sequence is

II-Discuss in details with drawing the internal reflection configurations. (20 marks)

III- Compare between the different types of systems tracts in seismic loop. (20 marks)

IV- Write short notes about the followings with drawing if possible: (45 marks)

- a- The unconformities surfaces displayed by seismic reflections.
- b- The external geometry of seismic facies units.
- c- The role of seismic stratigraphy in petroleum explorations.

V- Chose the most accurate answer: (25 marks)

1- What is true in the effects of frequency on stratigraphic resolution?

- a) The true stratigraphic relationships wouldn't be affect with frequency data.
- b) The true stratigraphic relationships would be imaged with relatively high frequency data.
- c) The true stratigraphic relationships would be imaged with relatively low frequency data.

2- For a reflection seismic survey, where the subsurface has an average P-wave velocity of 1000 m/s and we use a 10 ms seismic wavelet, the best resolution we could obtain is?


- a) 1 m
- b) 2.5 m
- c) 5m
- d) 10 m

3- The ability to see stratigraphic changes on seismic profiles depends on:

- a) High signal-to-noise ratio.
- b) Seismic pulse with a broad bandwidth encompassing both low and high frequencies.
- c) The all (a & b).

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY		
	EXAMINATION FOR SENIOR (LEVEL FOUR) STUDENTS OF GEOPHYSICS		
	COURSE TITLE:	HYDROGEOLOGY	
DATE:	JAN, 2017	TERM: FIRST	TIME ALLOWED: 2HOURS

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

Part I: Answer the followings:

- a- Enumerate and describe the following: (15 Marks)
- i) Types of drainage systems.
 - ii) Types of electrode arrangement of resistivity logging.
- b- Illustrate water well design and construction. (10 Marks)
- c- Discuss the ordering schemes of drainage basin (10 Marks)

Part II: Answer the followings:

- 1- What is well efficiency and how it could be determined using two different pumping test methods. (30 Marks)
- 2- Discuss the following in details: (30 Marks)
- a- Aquifer, confined and unconfined aquifer, isotropic and anisotropic aquifer, and homogeneous and heterogeneous aquifers
 - b- Depression cone
 - c- Elevation head, pressure head, hydraulic head and depth to water.
- 3- Discuss the followings: (25 Marks)
- a- Steady and unsteady pumping test conditions.
 - b- Groundwater flow net.
- 5- Write on the followings: (30 Marks)
- a- One main aquifer in Sinai
 - b- Nile Delta Aquifer.

EXAMINERS	PROF. DR. SHADIA T. ELKHODARY	PROF. DR. ZENHOM SALEM
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