المستوى الرابع - جيولوجيا جيولوجيا البترول في مصر ج ٤١٠ جيوفيزيا -

Mansoura University
Faulty of Science
Department of Geology
El Mansoura - Egypt

Date: June 03, 2014
Final semester – Academic year 2013/2014
4th Program Geology& Geophysics
Full Marks: 60 marks
Time allowed: 2 hrs

Final Exam in Petroleum Geology of Egypt (G410)

Answer the following questions

Q1. Compare between the Miocene succession in both the Gulf of Suez and the Nile Delta provinces. **(15 Marks)**

Q2. Write on the structural evolution of the Gulf of Suez **(15 Marks)**

Q3. Discuss the petroleum system of the Gulf of Suez, supporting your answer with an example. **(15 Marks)**

Q4. Write on the structural elements on both the Gulf of Suez and Nile Delta provinces. Explain the importance of block faulting. **(15 Marks)**

All the best

لجنة الامتحان والتصحيح:
أ.د. أمين غيث د. عبدالحميد طه د./ غالب عيسى* د./ وليد شكري

٤ جيوفيزياء - جيولوجيا البيئة وشكل الأرض (ج ٤٠٢)

Mansoura University
Faulty of Science
Department of Geology
El Mansoura - Egypt

Date: May 31, 2014
Final semester – Academic year 2013/2014
4th Program Geophysics
Full Marks: 60 marks
Time allowed: 2 hrs

Final Exam in Geomorphology and Hydrogeology in Egypt (G402)

Answer three questions ONLY

Q1. Define and explain: **(20 Marks)**

a. Water table (5 Marks)
b. Hydraulic gradient (5 Marks)
c. Porosity (5 Marks)
d. Permeability (5 Marks)

Q2. Write short notes on the following subjects **(20 Marks)**

a. Types of groundwater reservoirs (10 Marks)
b. Groundwater occurrences and its movements in non-saturated zone (10 Marks).

Q3. Write briefly on: **(20 Marks)**

a. Hydrological cycle (10 Marks)
b. Connate and perched water (10 Marks).

Q4. Compare between: **(20 Marks)**

a. Influent and effluent streams (5 Marks)
b. Confined and non-confined aquifers (5 Marks)
c. Recharge and discharge areas (5 Marks)
d. The movement of water in both subsoil and capillary horizons (5 Marks)

All the best

لجنة الامتحان والتصحيح:
أ.د. محمد عابد أ.د. أمين غيث أ.د./ حسني حمدان د./ حمدي سراج الدين*

المستوى الرابع - جيوفيزياء - فيزياء جوية ف ٤٣٤

Mansoura University **Faculty of Science** **Physics Department** **Subject: Physics**		**Second Term** **4th level Program : Geo-Physics** **Date : June 2014** **Time allowed : 2 hours**
Course : Physics 434 (General Meteorology)		**Full Mark: 60 Mark**

Answer All the following questions

[1] Explain or interpret the following: [20] Marks

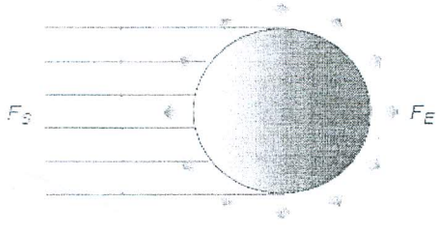
a- The gas constant for moist air is greater than that for dry air.
b- Charles' two laws.
c- Closed and open system in thermodynamics.
d- Saturation mixing ratios and potential temperature.

[2] [20] Marks

a- Show that the sum of partial volumes equals the total volume occupied by a mixture of gases. ?
b- If at 0°C the density of dry air alone is 1.275 kg m-3 and the density of water vapor alone is 4.770 x 10-3 kg m-3, what is the total pressure exerted by a mixture of the dry air and water vapor at 0 °C?
c- Explain the following items:
i- Isobar lines. ii- Isotherm lines.
d - On a clear day a snow surface is much brighter when the sun is nearly overhead.

[3] [20] Marks

a- Explain the following statements?
i- Smoke particles with a radius of ~ 0.5 mm appear bluish when viewed against a dark background but reddish when viewed against a light background (e.g., the sky).
ii-Light-colored clothing is often worn in hot climates
b- Write Stefan- *Boltzmann* low.?
c-Calculate the equivalent blackbody temperature of the Earth as depicted in the following figure, assuming a *planetary albedo* (i.e., the fraction of the incident solar radiation that is reflected back into space without absorption) of 0.30. Assume that the Earth is in *radiative equilibrium*; i.e., that it experiences no net energy gain or loss due to radiative transfer



Radiation balance of the Earth. Parallel beam solar radiation incident on the Earth's orbit, indicated by the thin red arrows, is intercepted over an area $\pi R^2 E$ and outgoing(blackbody) terrestrial radiation, indicated by the wide red

Examiners : 1- Dr. Reda Hasan Ali 2- Pro. Magdy Tadros Yacoub