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|  | TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF GEOLOGY | | | |
| | EXAMINATION FOR SENIOR (FOURTH YEAR) STUDENTS OF GEOLOGY | | | |
| | COURSE TITLE: | SUBSURFACE GEOLOGY AND HYDROGEOLOGY | | PAPER NO. 24054 |
| DATE: | JUNE, 2013 | TERM: SECOND | TOTAL ASSESSMENT MARKS: 60 | TIME ALLOWED: 3 HOURS |

Part I: SUBSURFACE GEOLOGY (120 Minutes, Total Marks 40)

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

1- Write on the followings : (12 marks)

- a) Criteria for subsurface faulting.
- b) Conventional resistivity logging.
- c) Rotary drilling method.

2- What are the information sources for subsurface investigation?. (10 marks)

3- Compare between the following : (12 Marks)

- a) GR log and SGR log.
- b) Isopach map and percentage map.
- c) Sonic log and neutron log.

4- Discuss the following subject : (6 marks)

- a) The lithologic components can be determined from the porosity log readings.
- b) The sonic log records matrix porosity rather than secondary porosity.

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| EXAMINERS | PROF.DR. NADER ELGENDY | DR. MOHAMED GAMAL ATAWIA |
| | DR SHADIA ABDELRAHEEM | DR. ZEINHM SALEM |

