



UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, DEC 2014

COURSE NO: **PE 279**

COURSE NAME: **PETROLEUM GEOLOGY**

CLASS: **PE II**

TIME: **3 HOURS**

Name: _____

Index Number: _____

ATTEMPT ALL QUESTIONS

Question 1

Define or explain the following terms:

- a) Kerogen
- b) Togo Series
- c) Trap
- d) Amissian Formation
- e) Crude oil
- f) Diapirs
- g) Tarkwaian Formation
- h) Birimian Supergroup
- i) Wet gas
- j) Reservoir

4 marks X 10 =40 marks

Question 2

- a) Describe the three main stages of the evolution of organic matter in sediments. *(10 marks)*
- b) Explain how the theory that oil and gas do not originate in the rock in which they are found is proved in practice. *(10 marks)*

Question 3

- a) Briefly discuss the organic theory that seek to explain how oil and gas reservoirs are formed. *(10 marks)*
- b) What are the main differences between structural and stratigraphic traps. *(7 marks)*
- c) State three natural drive mechanisms that can cause oil or gas to flow up a well bore. *(3 marks)*

Question 4

Discuss (i) The Voltaian System and (ii) Tano Basin under the following:

- a) Stratigraphy and rock types *(10 marks)*
- b) Hydrocarbon Exploration Potential *(10 marks)*

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