



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF PURE & APPLIED SCIENCES
APRIL/MAY, 2019 EXAMINATIONS

CHM 311-PETROLEUM CHEMISTRY (2 UNITS)

INSTRUCTION: Answer question 1 and any other 3 questions

Time allowed 2 hours

QUESTION 1

- a). Explain the terms Diagenesis and Mutagenesis. **(15 marks)**
- b). Explain in detail the composition of crude oil. **(5 marks)**
- c). Write the equation for the main stream reforming reaction. **(5 marks)**

QUESTION 2

- a). Define the term Catagenesis. **(5 marks)**
- b). Explain the term pour point. **(5 marks)**
- c). Why is it necessary to treat natural gas before use? **(5 marks)**

QUESTION 3

- a). What is catalytic methanation? **(5 marks)**
- b). Discuss the uses of ammonia. **(5 marks)**
- c). Define the following terms: oil field and Oil well. **(5 marks)**

QUESTION 4

- a). Explain the term cracking of petroleum. **(5 marks)**
- b). Explain in detail the origin and formation of biogas. **(5 marks)**
- c). Explain in detail how natural gas can be formed. **(5 marks)**

QUESTION 5

- a). Explain the following terms: (i) Salt content, (ii) Sulphur content (iii) Ash content. **(6 marks)**
- b). Discuss the classification of crude oil. **(9 marks)**