

**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF PURE & APPLIED SCIENCES**  
**JANUARY 2018 EXAMINATION QUESTIONS**

**CHM 311: PETROLEUM CHEMISTRY**

**CREDIT: 2 UNIT**

**TIME: 2 HOURS**

**INSTRUCTION: ANSWER QUESTION ONE & ANY OTHER THREE QUESTIONS.**

**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 as used in Petroleum chemistry. **(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)**

