



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF PURE & APPLIED SCIENCES
2023_2 EXAMINATIONS

COURSE CODE: CHM 311

CREDIT: 2 Units

INSTRUCTION: Answer Question ONE (1) and any other Three (3) Questions

COURSE TITLE: Petroleum Chemistry

TIME ALLOWED: 2 Hours

QUESTION ONE

- a) Define Crude oil (3 Marks)
- b) List and give brief explanation on three types of kerogens (6 marks)
- c) Differentiate between Natural gas and biogas (3 marks)
- d) Enumerate on the completion process of an oil well (5 marks)
- e) Mention 5 uses of Natural gas (5 marks)
- f) What is Stratigraphic Traps (3 marks)

QUESTION TWO

- a) Describe in detail the process of formation of petroleum (7.5 marks)
- b) How do Organic Materials contributes to the generation of petroleum (7.5 marks)

QUESTION THREE

- a) Accumulation and preservation of undegraded organic matter are prerequisites for the existence of petroleum, explain (9 marks)
- b) Write short note on the two classes of sulphur compounds present in crude oil (6 marks)

QUESTION FOUR

- a) Analyse the process of transportation and storage of Natural gas (8 marks)
- b) Give the full meaning of STOOIP and define Oil in Place (3 marks)
- c) Underline the basic knowledge needed for Accurate calculation of the value of STOOIP (4 marks)

QUESTION FIVE

- a) Give two examples each of the two types of sulphur compounds (2 marks)
- b) Sour Crude increases cost of production in petroleum industry, explain (5 marks)
- c) Mention the metals present in crude oil and explain how their presence affect crude oil industry (8 marks)