



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**JUNE/JULY EXAMINATION**

**COURSE CODE: CHM 311**

**COURSE TITLE: Petroleum Chemistry**

**TIME ALLOWED: 2 hours**

**INSTRUCTION: Answer 4 questions only**

1. (i) Write short notes on the following
  - a. Generation of crude oil (4marks)
  - b. Oil Fields (4marks)
  - c. Oil Wells (4marks)(ii) Define pour point (1½marks)
2. Write briefly on the following terms
  - (i) Town gas (4marks)
  - (ii) Bio gas (4marks)
  - (iii) Hydrates (2½marks)
  - (iv) Diagenesis (4marks)
  - (v) Metagenesis (3marks)
3. Depending on the relative ratio of the hydrocarbon classes that predominate in the mixture, list the various classes of crude oil. Discuss four of these classes in details. (17½marks)
4. (a) List the various methods of altering molecular structure in crude petroleum (3marks)  
(b) Write short notes on each of the following terms:
  - (i) Upstream Oil Sector (4marks)
  - (ii) Downstream Oil Sector (4marks)
  - (iii) Oil tanker (4marks)
  - (iv) Pipeline transport (2½marks)
5. (a) List two uses of methyl chloride (2 marks)  
(b) Discuss the potential market for Nigerian gas (15½ marks)
6. Write briefly on the following
  - a. production of urea (6marks)
  - b. uses of urea. (4marks)

c. Uses of methanol(7 ½ marks)