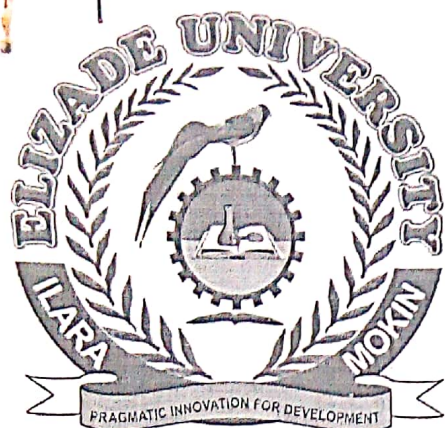


**ELIZADE UNIVERSITY**

**ILARA-MOKIN**

**ONDO STATE**



**FACULTY: BASIC AND APPLIED SCIENCES**

**DEPARTMENT: PHYSICAL AND CHEMICAL SCIENCES**

**FIRST SEMESTER EXAMINATIONS**

**2016/2017 ACADEMIC SESSION**

**COURSE CODE: CHM 357**  
**COURSE TITLE: Natural Products Chemistry I**  
**DURATION: 2 hours**

A handwritten signature in black ink, enclosed in a rectangular box.

**HOD's SIGNATURE**

**TOTAL MARKS: 60**

**INSTRUCTION: Answer three questions only**

### Question One.

The isolation, purification and identification of natural products often depend on the following procedures: (a) Chromatography, (b) Fractional distillation, (c) Extraction. Give concise definitions of each of the analytical procedures and explain how it is carried out. [20 marks]

### Question Two

- a. The hydroxyl group of cellulose can be partially or fully reacted with reagents to produce derivatives such as cellulose esters and cellulose ethers. Discuss two major cellulose esters and cellulose ether derivatives. [ 8 marks]
- b. Discuss the reactions of cellulose under the following headings:
  - i. Esterification [ 4 marks]
  - ii. Etherification [ 4 marks]
  - iii. Acetalformation [ 4 marks]

### Question Three

- a. Distinguish between terpenes and terpenoids. [ 4 marks]
- b. Discuss the classification of terpenes based on the number of terpene units in the molecule. [10 marks]
- c. Write short notes on fats and oils. [ 6 marks]

### Question Four

- a. What are alkaloids? [ 2 marks]
- b. Mention and discuss three types of alkaloids. [ 6 marks]
- c. State four properties of alkaloids. [ 4 marks]
- d. Discuss the uses of alkaloids under the following headings:
  - i. Agriculture [ 4 marks]
  - ii. Medicine [ 4 marks]