



**ELIZADE UNIVERSITY**

**FACULTY OF BASIC AND APPLIED SCIENCES**

**DEPARTMENT: PHYSICAL AND CHEMICAL SCIENCES**

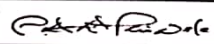
**PROGRAMME: CHEMISTRY EXAM TITLE: DEGREE EXAMINATION**

**COURSE CODE & TITLE: CHM 357 – NATURAL PRODUCTS CHEMISTRY**

**TIME ALLOWED: 2 hrs**

**SEMESTER/SESSION: FIRST / 2020/2021**

**INSTRUCTIONS:** Write your matriculation number on the cover page of the exam booklet. **ANSWER FOUR (4) QUESTIONS ONLY.**

  
**HOD's SIGNATURE**

**Question One**

Write short notes on the following headings:

- Triacylglycerols [ 3 marks]
- Glycerophospholipids [3 marks]
- Ether Glycerophospholipids [3 marks]
- Sphingolipids [ 3 marks]
- Sphingomyelins [ 3 marks]

**Question Two**

- What are alkaloids? [ 2 marks]
- Mention and discuss three types of alkaloids. [ 6 marks]
- Describe a named reaction involved in the biosynthesis of alkaloids [ 3 marks]
- Discuss the uses of alkaloids under the following headings:
  - Agriculture [ 2 marks]
  - Medicine [ 2 marks]

**Question Three**

- Discuss a named example of a cellulose ester derivative. [3 marks]
- Discuss the reactions of a cellulose under the following headings:
  - Esterification [3 marks]
  - Etherification [ 3 marks]
  - Acetalformation [ 3 marks]
- Clearly differentiate between starch and cellulose [3 marks]

**Question Four**

- Distinguish between terpene and terpenoid [ 2 marks]
- With the aid of chemical reactions, briefly describe the biosynthesis of terpene [5 marks]
- Discuss the classification of terpene based on the number of isoprene unit [ 5 marks]
- Distinguish between acyclic and cyclic sesquiterpenes [3 marks]

**Question Five**

- What are steroids? [ 3 marks]
- Write short notes on the following headings:
  - Corticosteroids [3 marks]
  - Steroid Synthesis [3 marks]
  - Steroidogenesis [3 marks]
  - Steroid degradation [3 marks]