



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

**A. M. E. C. E. A**

**MAIN EXAMINATION**

**JANUARY – APRIL 2022**

**FACULTY OF SCIENCE**

**DEPARTMENT OF BIOLOGY**

**REGULAR PROGRAMME**

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**BIO 207: ETHNOBOTANY AND PHYTOCHEMISTRY**

**Date: APRIL 2022**

**Duration: 2 Hours**

**INSTRUCTIONS: Answer Question ONE and any TWO Questions**

1. a) Explain the contribution of the following scientists in Ethnobotany
  - i. John Harshberger (1 Mark)
  - ii. Anotheus Seydler (1 Mark)
  - iii. Dioscorides Pedanius (1 Mark)
  - iv. Aelius Galenus (1 Mark)
  - v. Willium Withering (1 Mark)
- b) Define the terms: ethnobotany, pharmacognosy and phamacotherapeiuties (5 Marks)
- c) Suggest the reasons for increased interest for herbal products (5 Marks)
- c) Explain the procedure of aqueous extraction method of plant extracts (5 Marks)
- d) Highlight five responsibilities of any state wildlife agencies in Kenya (5 Marks)
- e) Describe the role of rDNA technology advances in ethnobotany (5 Marks)
- f) Describe qualitative phytochemical screening for alkaloids (5 Marks)
2. Describe the principle of following techniques for phytoscreening
  - a) High performance liquid chromatography (HPLC) (8 Marks)
  - b) Gas chromatography- mass spectrophotometry (GC-MS) (7 Marks)
  - c) Liquid chromatography- mass spectrophotometry (LC-MS) (5 Marks)
3. Discuss the Biosynthesis pathway of secondary metabolites (20 Marks)
4. Describe the general principles for cultivation of medicinal plants (20 Marks)
5. Discuss good collection practices for medicinal plants (20 Marks)

**\*END\***

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