



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

AUGUST – DECEMBER 2018 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 207: ETHNOBOTANY AND PHYTOCHEMISTRY

Date: DECEMBER 2018

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Explain the role of the three proteins associated with the cell membrane
(6 marks)
- b) Explain the importance of microbodies and oleosome in plants cells
(4 marks)
- c) Describe the poikilohydric and homoiohydric lifestyle of plants during evolution
(6 marks)
- d) Differentiate volatile and non-volatile terpenes and in each case give examples
(4 marks)
- e) Explain the role of the following pathways mevalonic and shikimic in plant metabolism
(4 marks)
- f) Explain the difference between wild and domesticated plants by explaining the difference between artificial and natural selection.
(6 marks)
- Q2. a) Discuss the functions of terpenes (12 marks)
- b) Explain why there is need to conservation of wild species (8 marks)
- Q3. Describe five transgenic plants and explain how they were developed
(20 marks)

- Q4. a) What crops were domesticated in the New World? (4 marks)
- b) Discuss different centers of origin proposed for plant domestication (16 marks)
- Q5. a) Discuss with examples five medicinal use of alkaloids (10 marks)
- b) Describe methods used in extraction of active compounds in plants (10 marks)

END