



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

AUGUST - DECEMBER 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

SCHOOL FOCUSED PROGRAMME

BIO 302: PLANT STRUCTURES

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Date: DECEMBER 2015

Duration: 3 Hours

INSTRUCTIONS: Answer Question ONE and ANY other THREE Questions

- Q1. a) Define the following terms
- i Taxon. (1 marks)
 - ii Secondary metabolite. (1 mark)
 - iii Effective publication. (1 mark)
 - iv Phylogenetics. (1 mark)
 - v Holotype. (1 mark)
 - vi Herbarium specimen. (1 mark)
- b) Differentiate between the following
- i Plant taxonomy and plant structure
 - ii Artificial and natural classification systems.
 - iii Phenetics and cladistics
 - iv Character and character states
 - v Lectotype and syntype
 - vi Identification and classification
- c)
- i List the suffixes of the SIX major classification taxa. (3 marks)
 - ii List the main development periods of plant systematic. (4 marks)
 - iii Why is plant systematic considered an old science. (1 mark)
 - iv List THREE examples of nomina familia conservenda. (3 marks)

- Q2. i Discuss the types of taxonomic literature generated by plant systematics.
(12 marks)
- ii Discuss the circumstances that can lead to botanical name change.
(8 marks)
- Q3. Discuss the merits and demerits of botanical and local common names.
(20 marks)
- Q4. Outline the principles and historical development of the international code of Botanical Nomenclature.
(20 marks)
- Q5. Discuss the principles and methods of plant collection and herbarium specimen selection and management.
(20 marks)

END