



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF EDUCATION AND BACHELOR OF SCIENCE**

SBT 301 – TAXONOMY OF HIGHER PLANTS

DATE: MONDAY 2ND APRIL 2012

TIME: 8.00 A.M. – 10.00 A.M.

INSTRUCTIONS

SECTION A: Short Answer questions (40 marks)

Instructions:

Answer **ALL** questions in **Section A** and any **ONE** question in **Section B**. Answers to **Section A** should be concise and written in the spaces provided in the question paper.

1. Match the following authors with the book titles listed below.
John Ray, Linnaeus, De Candolle, Caesalpinus, De Tournefort.

- a) *Prodromus Systematis Naturalis Regni Vegetabilis* _____
- b) *Institutions Rei Herbariae* _____
- c) *Methodus Plantarum* _____
- d) *Species Plantarum* _____
- e) *De Plantis* _____

2. Differentiate between the following terms:

- a) Convolute and imbricate aestivation

- b) Corymb and umbel

c) Free central and axile placentations

3. Describe and illustrate the following inflorescence structures

a) Capitulum

b) Verticillaster

c) Name the families to which the inflorescences are characteristic

i. Capitulum _____

ii. Verticillaster _____

4. Put the ending and give an example to the following units of classification.

Unit

Ending

example

Eg. Order

-ales

Malvales

a) Division

b) Class

c) Family

d) Subfamily

e) Tribe

5. Give an outline of classification scheme by Eichler

6. Outline five functions of a herbarium

7. *Commiphora zanzibarica* (Baill) Engl. is a name of a species.

a) Who was the first person to describe the species?

b) Give one reason why a new combination was made.

c) How was the specific epithet derived?

d) Apart from the reason given in (b) above, give two other reasons why botanical names are changed.

8. (a) Define the following terms

i. Holotype

ii. Lectotype

(b) Give three reasons why author citations are important in plant names.

SECTION B: ESSAY (30 MARKS)

1. Describe in detail the preparation of specimens for a herbarium.
2. Write an essay on adaptations of flowers to pollination mechanisms.
3. Write an essay on Phylogenetic systems of classification.