

**UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2014/2015**

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE, BACHELOR OF SCIENCE IN AGRICULTURE, BACHELOR OF SCIENCE IN AGRICULTURAL EXTENSION AND EDUCATION.

**AAH 3150: AGRICULTURAL PLANT TAXONOMY**

**DATE: APRIL 2015 TIME: 2 HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. State 2 technological innovations that contributed to plant systematic (2 marks)
2. Explain the contributions of the following scientists to plant taxonomy
3. Theophrastus (2 marks)
4. Adanson (2 marks)

c) (i) Linnaeus (abbreviated as L) described a plant and validly published its name as

*Commelina benghalensis*. A subspecies was described and its name published by

Chiror as hirsuta. Write the full name of the species (2 marks)

(ii) W.G Smith described a plant and published its name as *phyllanthus nivosis*. Later on,

small validly moved the plant to the genus *Breynia*, hence the name became Braybia nivosus. Write the new name with authority citation (2 marks)

1. Explain the meaning of a plant name written as :Trifolium xugria (1 mark)

d) Explain a validly published name (4 marks)

e) Distinguish among Neotype, lectotype and holotype (3 marks)

f) Differentiate between artificial and natural classification systems (3 marks)

g) State 3 problems associated with the use of dichotomous keys in plant identification (3 marks)

h) State 3 diagnostic features of family asteraceae (3 marks)

i) Describe 2 importance of the herbarium and state the system of classification used in the East

African herbarium

**QUESTION TWO (20 MARKS)**

Discuss 5 main sources of taxomonic evidence

**QUESTION THREE (20 MARKS)**

1. Describe the family fabaceae distinguishing its sub-families (14 marks)
2. State with appropriate examples the economic importance of family fabaceae (6 marks)

**QUESTION FOUR (20 MARKS)**

Describe with illustrations the diagnostic characteristics of the family poaceae and state their economic importance