BONDO UNIVERSITY COLLEGE

UNIVERSITY EXAMINATION 2012/2013

1ST YEAR 2ND SEMESTER EXAMINATION FOR THE

DEGREE OF BACHELOR OF EDUCATION SCIENCE WITH IT

(REGULAR)

COURSE CODE: SBT 103

TITLE: INTRODUCTORY PLANT SYSTEMATICS

DATE: 26/11/2012   TIME: 12.00-14.00PM

DURATION: 2HOURS

<u>INSTRUCTIONS</u>

1) Answer <u>ALL</u> questions in section A and any <u>TWO</u> questions in section B.
2) Illustrate your answers with well labeled diagrams where necessary.
3) Write ALL answers in the booklet provided

SECTION A: ANSWER ALL QUESTIONS (30 marks)

Question 1.

a) Shortly explain why it is necessary to study biosystematics (3marks)
b) Briefly, describe the use of chemicals naturally found in plants as a basis for studying biosystematics
c) What are the problems of modern taxonomy?(3 marks)

d) Describe a herbarium and state its functions to the study of biosystematics (3marks)
e) State how Fleshy plants and Bulky plants can be stored for study in a biology laboratory (3 marks)
f) Briefly discuss how anatomical structures are used in classification (3 marks)
g) State the principles of plant nomenclature (3 marks)
h) With the help of illustrations, briefly discuss any three major leaf shapes as a source of taxonomic information to biosystematics (3 marks)
i) State the major groups of plants of importance in ecology and biological Sciences (3 marks)
j) Use equations to explain the concept of "phenotypic plasticity" in plants (3 marks)

SECTION B: ANSWER ANY <u>TWO</u> QUESTIONS FROM THIS SECTION (40 Marks each)

Question 2.

Discuss botanical techniques involved in the collection and preparation of specimens for the herbarium (20 marks)

Question 3
Describe how systematics is related to other botanical sciences (20 marks)

Question 4.

Discuss in detail the historical development of plant systematics indicating some of the key events and personalities in a chronological order (20 marks)

Question 5.

Using appropriate examples, discuss the structure of the taxonomic hierarchy in plants (20 marks)