



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION AND BACHELOR OF SCIENCE

SBT 204: PTERIDOPHYTES AND BRYOPHYTES

DATE: TUESDAY, 6TH DECEMBER 2011

TIME: 8.00 A.M. – 10.00 A.M.

Instructions: Answer ALL questions in Section A and any ONE question in Section B. Answers in Section A should be written in the spaces provided on the question paper.

SECTION A: SHORT ANSWER QUESTIONS (40 marks)

1. (a) Write two reasons why bryophytes are restricted to cool moist conditions.

(b) Describe briefly the ecology of bryophytes.

2. Draw a labelled diagram to show the distribution of tissues in the sporophyte of *Anthoceros*.

3. Distinguish between the following features of bryophytes:

(a) Endohydric and ectohydric mosses.

(b) Acrocarpus and pleurocarpus mosses.

(c) Stegocarpus and cleistocarpus mosses

4. Describe the arrangement and structure of leaves in the Jungermanniales.

5. Give reasons why the Psilophyta are regarded as the most primitive pteridophytes.

6. With the aid of simple diagrams, describe the main stele types in pteridophytes.

7. Describe the formation of the male gametophyte in *Selaginella*.

8. Draw a labeled diagram to show the anatomy of *Equisetum* stem.

SECTION B: ESSAY QUESTIONS (30 Marks each)

1. Compare and contrast the gametophyte morphology and structure of *Anthoceros* and *Marchantia*.
2. Write an essay on the variation in the leaves and sporophyte structures of mosses.
3. Describe alternation of generations in ferns.
