



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (BIOLOGY)

SBT 204: BRYOPHYTES AND PTERIDOPHYTES

DATE: 25/11/2020

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

1. Answer Question 1 (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

SECTION A: COMPULSORY

QUESTION ONE (30 MARKS)

- a) Outline three general characteristics of Bryophytes (3 marks)
- b) Outline three characteristics of liverworts (3 marks)
- c) Explain three growth forms of bryophytes (3 marks)
- d) Describe three characteristics of a sporophyte of a moss (3 marks)
- e) Explain the meaning of the following terms. (4 marks)
 - i) Perichaetial leaves
 - ii) strobilus
 - iii) Protonema
- f) Highlight three distinguishing characteristics of the following (3 marks)
 - i) Zosterophyllophytes
 - ii) Equisetales
- g) Explain the function of the following parts (3 marks)
 - i) Gemma cups
 - ii) antheridia
 - iii) rhizoids
- h) Differentiate between thalloid and leafy liverworts (3 marks)
- i) Illustrate the sporophyte of *Anthoceros* (3 marks)
- j) Differentiate between moss and liverwort life cycles (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

Discuss ecological importance of bryophytes

QUESTION THREE (20 MARKS)

Discuss the economic importance of pteridophytes

QUESTION FOUR (20 MARKS)

Discuss reproduction in bryophytes

QUESTION FIVE (20 MARKS)

Discuss the life cycle of pteridophytes