



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF EDUCATION (SCIENCE)

SBT 101: SURVEY OF THE PLANT KINGDOM

DATE: 13/8/2021

TIME: 2:00 – 4:00 PM

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 (30 MARKS)

This question should cut across the entire course content. It should have 10 subsections, each worth a maximum of 3 marks.

- a) Draw and label the various parts of *Euglena*.
- b) List the functions of the various parts of a Lichen thallus
- c) Explain the following terms
 - a. Akinete
 - b. Zoospore
 - c. Cephalodia
- d) State three economic importance of fungi.
- e) Define the three types of sexual reproduction observed in Algae
- f) Enumerate any three growth forms found in Lichens
- g) Distinguish between the following terms
 - a. Megagametophyte and microgametophyte
 - b. Perichaetial leaves and perigonal leaves
 - c. Acrocarpous and Pleurocarpous mosses

- h) State the functions of the following parts of a bryophyte sporophyte
 - a. Seta
 - b. Peristome teeth
 - c. Operculum
- i) State any three general characteristics of Pteridophytes
- j) State and illustrate the differences between monocotyledonous and dicotyledonous plants with reference to secondary thickening, leaf venation, flower parts, embryo and root systems.

SECTION B: ANSWER ANY OTHER TWO QUESTIONS

QUESTION TWO (20 MARKS)

Discuss the economic importance of Lichens.

QUESTION THREE (20 MARKS)

Discuss reproduction in Peridophyte as exemplified by *Selaginella kraussiana*.

QUESTION FOUR (20 MARKS)

Discuss growth forms and reproduction in Algae.

QUESTION FIVE (20 MARKS)

Gymnosperms are of great economic importance to man. Discuss.