



MACHAKOS UNIVERSITY

University Examinations 2019/2020 academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)
BACHELOR OF EDUCATION (SCIENCE)
BACHELOR OF SCIENCE (BIOLOGY)
SBT 101: SURVEY OF PLANT KINGDOM

DATE: 22/1/2021

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

QUESTION ONE COMPULSORY (30 MARKS)

- a) State the subdivisions of the Embryophyta subkingdom down to monocotyledonous and dicotyledonous plants. (3 marks)
- b) Draw a bacterium, label and state the functions of the various parts. (3 marks)
- c) Describe two asexual reproduction methods in fungi. (3 marks)
- d) Briefly discuss the importance of algae to man. (3 marks)
- e) Differentiate between a fungus, algae and lichens. (3 marks)
- f) Discuss the alternation of generation in bryophytes. (3 marks)
- g) Describe the various protostele types found in sporophyte pteridophyte. (3 marks)
- h) In which aspects are bryophytes related to algae? (3 marks)
- i) Discuss the life-cycle of a gymnosperm. (3 marks)
- j) Outline the main features of angiosperms which make them the most advanced plants. (3 marks)

SECTION B

QUESTION TWO (20 MARKS)

Distinguish between the three systems of plant classification.

QUESTION THREE (20 MARKS)

Describe the reproductive cycle of *Rhizopus stolonifer*.

QUESTION FOUR (20 MARKS)

Gymnosperms are of great use to man. Discuss

QUESTION FIVE (20 MARKS)

Explain and illustrate the life-cycle of a pteridophyte.