



# MACHAKOS UNIVERSITY

University Examinations 2018/2019  
SCHOOL OF PURE AND APPLIED SCIENCES  
DEPARTMENT OF BIOLOGICAL SCIENCES  
FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR  
BACHELOR OF EDUCATION (SCIENCE)  
BACHELOR OF SCIENCE IN BIOLOGY  
SBT 101: SURVEY OF PLANT KINGDOM

DATE: 24/7/2019

TIME: 2.00-4.00 PM

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## 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

Distinguish between the three systems of plant classification. (20 marks)

### QUESTION THREE

Describe the reproductive cycle of *Rhizopus stolonifer*. (20 marks)

### QUESTION FOUR

Gymnosperms are of great use to man. Discuss (20 marks)

### QUESTION FIVE

Explain and illustrate the life-cycle of a pteridophyte. (20 marks)