



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF SCIENCE (BIOLOGY)

SBT 101 SURVEY OF PLANT KINGDOM

DATE: 26/1/2022

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 (30 MARKS)

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| a) | Describe the unicellular forms of the algae. | (3 marks) |
| b) | Describe the ecological adaptations of the algae. | (3 marks) |
| c) | Describe the asexual reproduction of the division Charophyta. | (3 marks) |
| d) | Differentiate between angiosperms and gymnosperms. | (3 marks) |
| e) | Differentiate between the flowering plants and the liverworts. | (3 marks) |
| f) | Explain three common characteristics of the kingdom Plantae. | (3 marks) |
| g) | Give the characteristics of the Ginkgophytes. | (3 marks) |
| h) | Explain the economic importance of gymnosperms. | (3 marks) |
| i) | Explain why conifers survive in harsh environments. | (3 marks) |
| j) | Describe the classification of fungi by mode of nutrition. | (3 marks) |

SECTION B

QUESTION TWO (20 MARKS)

- a) Explain the general characteristics of the algae. (10 marks)
- b) Describe the methods of asexual reproduction in algae. (10 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the economic importance of the fungi. (10 marks)
- b) Describe the growth forms of the lichens. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe the characteristic features of the division sub-Lycophyta (10 marks)
- b) Differentiate between Pteridophytes and Bryophytes (10 marks)

QUESTION FIVE (20 MARKS)

Describe the lifecycle a named bryophyte.