



MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION
BACHELOR OF EDUCATION SPECIAL NEEDS EDUCATION
BACHELOR OF EDUCATION SCIENCE

SBT 101: SURVEY OF PLANT KINGDOM

DATE: 23RD JANUARY, 2025

TIME: 8.30 AM – 10.30 AM

INSTRUCTIONS:

- Answer question **ONE (Compulsory)** and **any other TWO** questions
- Use clean well labelled diagrams wherever appropriate

QUESTION ONE (30 MARKS)

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|---|-----------|
| a) Outline the criteria used to classify plants into sub-groups. | (3 marks) |
| b) Differentiate between zoospores and aplanospores. | (3 marks) |
| c) Explain the ecological importance of gymnosperms. | (3 marks) |
| d) Describe the ecological adaptations of the algae. | (3 marks) |
| e) Describe the asexual reproduction of the blue green algae. | (3 marks) |
| f) Describe three methods of asexual reproduction in the division Charophyta. | (3 marks) |
| g) Identify main characteristics of the division Rhodophyta. | (3 marks) |
| h) Describe the characteristics of the division Xanthophyta. | (3 marks) |
| i) Explain the asexual reproduction of the fungi. | (3 marks) |
| j) Outline the characteristics of the ginkgoales. | (3 marks) |

QUESTION TWO (20 MARKS)

- a) Discuss the characteristics of the fungi. (10 marks)
- b) Discuss the characteristics of the angiosperms. (10 marks)

QUESTION THREE (20 MARKS)

- a. Explain the uses of the Gymnosperms. (10 marks)
- b) Differentiate between monocotyledons and dicotyledons. (10 marks)

QUESTION FOUR (20 MARKS)

Discuss the vegetative structures and economic importance of the lichens.

QUESTION FIVE (20 MARKS)

- a) Describe the main characteristic of the pteridophyte. (10 Marks)
- b) Describe the life cycle of the Chlamydomonas. (10 marks)