

**APPLIED BIOLOGY LEVEL 6**

**SBT 2150**

**TAXONOMY OF LOWER PLANTS**

**MARCH/APRIL 2024**

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**WRITTEN ASSESSMENT**

**TIME: 3 HOURS**

**INSTRUCTIONS TO CANDIDATES**

1. This paper has two sections **A** and **B**.
2. You are provided with separate answer booklet.
3. Marks for each question are indicated.
4. Do not write on the question paper.

## SECTION A

Answer all the questions in this section

1. Summarize the general characteristics of algae (4 marks)
2. Outline the criteria adopted to classify fungi (5 marks)
3. Explain any **two** multicellular forms of algae (4 marks)
4. Enumerate the features that enabled the pteridophytes to thrive on land (4 marks)
5. Highlight the types of carbohydrates stored by the following algae divisions (4 marks)
  - i. Chlorophyta (green algae)
  - ii. Phaeophyta (brown algae)
  - iii. Rhodophyta (red algae)
  - iv. Euglenophyta (euglenoids)
6. Plasmogamy and karyogamy are processes that occur during sexual reproduction of fungi. Explain how the two processes occur (4 marks)
7. Highlight **three** features that bryophytes have in contrast with land plants (3 marks)
8. Explain the **two** means of vegetative reproduction of liverworts (4 marks)
9. Outline the economic importance of bryophytes (4 marks)
10. Explain the **two** modes of nutrition exhibited by fungi (4 marks)

## SECTION B (60 MARKS)

Answer any **three** questions in this section

11. a) Define the following terms and explain how algae survive in each of these habitats;
  - i. Hydrophytes (2 marks)
  - ii. Edaphophytes (2 marks)
  - iii. Aerophytes (2 marks)
  - iv. Cryophytes (2 marks)
  - v. Symbionts (2 marks)

b) Write notes to describe division polypodiophyta (ferns) of pteridophytes (10 marks)
12. a) Bryophytes and pteridophytes are close relatives in classification hierarchy. Explain the features they have in common (10 marks).
  - b) Explain the ecological roles of Bryophytes (5 marks).
  - c) Bryophytes and land plants share some of the attributes. Justify this phenomenon (5 marks)
13. a) Discuss the types of asexual reproduction exhibited by fungi (10 marks)

b) Analyze the general characteristics of class Zygomycetes of fungi (10 marks)

14. a) Describe the resemblance between Bryophytes and Algae (10 marks).

b) Discuss the economic importance of Algae (10 marks)