

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF  
SCIENCE IN BOTANY

**BOTA 233: MYCOLOGY**

**STREAMS: BSc. BOTANY**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 14/04/2025**

**2.30 P.M. – 4.30 A.M.**

**INSTRUCTIONS**

- i. Answer all questions in section A and any two in section B**
- ii. Do not write anything on the question paper**
- iii. Use illustrations where appropriate to enhance your answer.**

**Section A (30 marks)**

1. a) Describe the role of cellulose in the fungal cell membrane. [3 marks]  
b) Differentiate between septate and coenocytic hyphae. [2 marks]
2. a) Distinguish between mycelial strands and rhizomorphs. [2 marks]  
b) Using illustration, describe the structure and function of appressorium. [3 marks]
3. List five environmental factors that influence fungal growth. [5 marks]
4. a) Give two reasons why *Saccharomyces cerevisiae* is widely used for recombinant DNA technology. [2 marks]  
b) Discuss three factors that can compromise human health making them susceptible to fungal infections. [3 marks]
5. Highlight various factors that are considered in the classification of fungi. [5 marks]
6. Describe the general characteristics of Deuteromycota. [5 marks]

**Section B (40 marks)**

7. Discuss the economic importance of fungi in
- i) Agriculture [10 marks]
  - ii) Industries. [10 marks]
8. a) Explain the different modes of fungal spore dispersal. [8 marks]
- b) Describe the process of fermentation in yeast and its industrial applications. [12 marks]
9. a) Discuss any five fungal diseases affecting humans and their treatment. [10 marks]
- b) Discuss any five types of mycotoxins. [10 marks]
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