



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF AGRICULTURE

UNIVERSITY ORDINARY EXAMINATION

2020/2021 ACADEMIC YEAR

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE
IN AGRICULTURAL EDUCATION AND EXTENSION**

**BACHELOR OF AGRICULTURAL MANAGEMENT AND ENTERPRISE
ABT 100– INTRODUCTORY BOTANY**

DURATION: 2 HOURS

Instructions to candidates:

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE (30 MARKS)

- a) Define the following terms:
- (i) Plant systematics (1mark)
 - (ii) Parthenocarpy (1mark)
 - (iii) Synapsis (1mark)
 - (iv) Alteration of generation (2marks)
- b) (i) Name two close relatives of Embrophytes which are exempted from the monophyletic grouping in plantae kingdom. (2marks)
- (ii) Explain the evolutionary relationship between gymnosperms and angiosperms. (3marks)
- c) Compare and contrast Mitosis and Meiosis cell divisions in plants. (5marks)
- d) (i) How does *Digitalis purpurea* illustrate the significance of botany to man. (2marks)
- (ii) Highlight 3 economic importance of Bryophytes. (3marks)
- e) (i) Explain 3 mechanism that discourage self-pollination and self-fertilization in plants. (3marks)
- (ii) Describe two changes that occurs to flower structures after fertilization. (2marks)
- f) (i) Explain the general characteristics of gramineae family (2marks)
- (ii) Describe the economic importance of Okra- lady's fingers and its family relatives. (3marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

- a) Explain methods of asexual propagation in flowering plants. (10marks)
- b) Illustrate the process of double fertilization in flowering plants. (10marks)

QUESTION THREE (20 MARKS)

- a) Explain different types of herbarium. (6marks)
- b) Describe botanical inventory techniques. (14marks)

QUESTION FOUR (20 MARKS)

Describe the family asteraceae under the following headings.

- (a) affinities (2marks)
- (b) Economic importance (6marks)
- (c) General characteristics (12marks)