



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF PURE, APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PHYSICAL AND BIOLOGICAL SCIENCES

UNIVERSITY ORDINARY EXAMINATION

2021/2022 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR, BACHELOR OF
EDUCATION SCIENCE**

AZL 305: ENTOMOLOGY I

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) i) Outline the functions of wing veins in insects. (4 marks)
- ii) Explain how the wings of a beetle differ from those of a grasshopper. (2 marks)
- b) Differentiate the structure of a compound eye from that of an ocellus. (4 marks)
- c) Compare and contrast the arthropodans and dipterans. (6 marks)
- d) Evaluate the limitations and strengths of pitfall traps method. (4 marks)
- e) Describe the lifecycle of a named Lepidoptera. (6 marks)
- f) Explain first four stages of embryonic development in insects. (6 marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

A rare form of a viral disease has recently mutated into a new biotype that is pathogenic and is projected to wipe out all insect life within the next two years. Discuss the major consequences such a mass extinction will have on human life. (20 marks)

QUESTION THREE (20 MARKS)

Using illustrations, describe the various types of insect antennae. (20 marks)

QUESTION FOUR (20 MARKS)

Discuss the social behaviour, reproduction and control of termites. (20 marks)