



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS  
MAIN EXAMINATIONS**

**UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR**

**FOURTH YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
BACHELOR OF EDUCATION SCIENCE**

**COURSE CODE: SZL 411**

**COURSE TITLE: ENTOMOLOGY**

**DATE: FRIDAY, 8<sup>TH</sup> FEBRUARY 2019**

**TIME: 8:00 – 10:00 A.M.**

**INSTRUCTIONS TO CANDIDATES**

Answer ALL questions in section A and ANY TWO selected from section B

TIME: 2 Hours

**MMUST observes ZERO tolerance to examination cheating**

This Paper Consists of 2 Printed pages. Please Turn Over. 

**SECTION A (SHORT ANSWER QUESTIONS, 40 MARKS)**

- 1) Draw a well labelled diagram of a member of the order Diptera (5 marks)
- 2) Distinguish between exopterygota and endopterygota giving an example of each (5 marks)
- 3) Briefly discuss the significance of insects in the ecosystem (5 marks)
- 4) Explain chemical reception in insects (5 marks)
- 5) Differentiate between the air bubble and breathing tubes in insects (5 marks)
- 6) Briefly describe molting in insects (5 marks)
- 7) Distinguish between hemimetabolous and holometabolous insects giving an example of each (5 marks)
- 8) Explain the importance of springtails in the ecosystem (5 marks)

**SECTION B (ESSAY QUESTIONS, 30 MARKS)**

- 9) Bees are very organized insects: Discuss (15 marks)
- 10) Discuss the significance of the exoskeleton in the class Insecta (15 marks)
- 11) Discuss locomotion in insects (15 marks)