



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

**UNIVERSITY EXAMINATIONS**

**2021 /2022 ACADEMIC YEAR**

**MAIN EXAMINATIONS  
MAIN CAMPUS**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
MASTER OF SCIENCE IN APPLIED ENTOMOLOGY**

**COURSE CODE: SZL 832**

**COURSE TITLE: INSECT POPULATION ECOLOGY**

**DATE: TUESDAY, 19<sup>TH</sup> APRIL 2022**

**TIME: 9:00 – 12:00 P.M.**

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**INSTRUCTIONS TO CANDIDATES**

Answer FOUR questions, question ONE is compulsory

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

1. a) Describe the significance of “bookkeeping” by the ecologists. (8 marks)  
b) Distinguish between autecology and synecology. (7 marks)
2. Differentiate between J and S curves. (15 Marks)
3. Discuss population growth of a given insect under natural conditions. Use graphs to illustrate your answer. (15 Marks)
4. A female mosquito lays 600 eggs, 50 do not hatch due to not being fertilized, and 50 are swept away by rain water. Fifty percent of the larvae die due to drying up of portion of the habitat. Three quarters of pupae are eaten by predators. Assume a male: female ratio of 1:1 . Draw a life table for the mosquito and find out the trend of that population (15marks)
5. Describe how you would manage a new pest in your area of jurisdiction. (15 Marks)