JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
THIRD YEAR FIRST SEMESTER UNIVERSITY EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN FOOD SECURITY
2022/2023 ACADEMIC YEAR
REGULAR

COURSE CODE: APT 3315
COURSE TITLE: ENTOMOLOGY AND FOOD PRODUCTION
EXAM VENUE:
STREAM: BSC. FOOD SECURITY
DATE: EXAM SESSION:
TIME: 2 HOURS

INSTRUCTIONS:
1. **Answer ALL questions in Section A and any Two (2) questions in Section B.**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must submit their answer booklets to the invigilator while in the examination room.**

SECTION A (30 MARKS)
Answer all questions in this section

1. Using specific examples, outline **three** adaptive functions performed by legs of beneficial insects (3 marks)

2. Outline **three** unique morphological features used to distinguish insect from other species of arthropods (3 marks)

3. Under what circumstances is a country said to be food secure? (3 marks)

4. Using specific examples explain how insect vectors of animal diseases contribute to food insecurity (3 marks)

5. List **six** examples of insect pests and their host crops (3 marks)

6. Describe **three** limitations of using insecticides for pest control (3 marks)

7. State how you can determine the nutritional value of edible insects (3 marks)

8. Explain what would happen to major world food crops if there were no insect pollinators

(3 marks)

9. Describe **six** factors required for optimal performance of insect pollinators in a greenhouse culture (3 marks)

10. Describe **six** characteristics used to select beneficial insect species for mass rearing (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

11. Explain why the use of insects for food and feed should be encouraged in Africa and how this should be promoted at the moment (20 marks)

12. Describe factors that threaten survival of natural populations of insect pollinators and how such populations can be protected (20 marks)

13. Describe the principles and process of integrated pest management in plantation farming of food crops (20 marks)

14. Using specific examples, describe the economic importance of insects in the Lake Victoria Basin of East Africa (20 marks)