



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**UNIVERSITY EXAMINATION 2018/2019**

**SECOND YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC  
HEALTH AND COMMUNITY HEALTH AND DEVELOPMENT**

**COURSE CODE: HCD 3212**

**COURSE TITLE: ENTOMOLOGY AND PEST MANAGEMENT**

**DATE**

**TIME**

**DURATION: 2 HOURS**

**INSTRUCTIONS:**

- 1. This paper contains two sections (A and B)**
- 2. Answer ALL questions in Section A and any Two (2) questions in Section B**
- 3. Write ALL answers in the booklet provided**
- 4. You may use illustrations in your answers as you deem necessary**

**SECTION A (30 marks)**

1. i). Differentiate between Morphology and Anatomy of an insect (5 marks)  
ii) Outline the morphology of an insect and its appendages
2. i). Outline 4 categories of control methods for Arthropods (5 marks)  
ii). Name five (5) insect Orders that contain either pests or vectors of disease:
3. Define the following terms (5 marks)
  - a. Parasitoid
  - b. Zoonosis
  - c. Ecdysis
  - d. Gonotrophic cycle
  - e. Sporozoite
4. i) Which insects are categorized as social insects? (5 marks)  
ii) State the four characteristics which qualify an insect to be social.
5. i) Describe the three forms of Leishmaniasis and the organs which they affect. (5 marks)  
ii) Provide the scientific names of three species of Lice which affect human beings.  
iii) Name four Arboviruses commonly found in Subsaharan Africa
6. State three medical conditions attributable to mite infestations. (5 marks)

**SECTION B (40 Marks)**

7. Trace the pathway of the malarial parasite *Plasmodium* from when an *Anopheles* mosquito bites an infected person to the next victim of malaria attack. How can malaria transmission be managed? (20 marks)
8. Outline and discuss the classification of arthropods which transmit diseases to humans and domestic animals. (20 marks)
9. Describe the at least three parasitic agents of public health importance and how they can be treated. (20 marks)
10. Give an account of ways in which vectors/pests of animals can be managed to prevent, control, and treat the diseases they are likely to transmit to humans. Use specific examples of arthropods involved and the causative organisms they may carry. (20 marks)