



WI-2-60-1-6

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2024/2025

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER
OF SCIENCE IN PARASITOLOGY & ENTOMOLOGY

TPE 3102: MEDICAL ENTOMOLOGY

MAIN EXAMINATION

DATE: DECEMBER 2024

TIME: 3 Hours

INSTRUCTIONS: Answer any FOUR questions. Illustrate your answers where appropriate.

Question 1:

- a) Giving examples, explain the life cycle of Ixodidae (hard) ticks and three - host life cycles of Argasidae (soft) ticks (17 Marks)
- b) Briefly explain the medical importance of ticks (8 Marks)

Question 2:

Outline the external morphology, life cycles, ecology and control of vectors of African and American trypanosomiasis. (25 marks)

Question 3:

Elucidate the characteristics of Integrated Vector Management (IVM) and examples of vector control measures that may be included in an IVM programme. (25 Marks)

Question 4:

- a) Evaluate entomological indices as they relate to malaria transmission. (9 Marks)
- b) Relate morphological differences between Anopheles, Aedes and Culex mosquitoes (8 Marks)
- c) Give an account on medical importance of Aedes and Culex mosquitoes. (8 marks)

Question 5:

- i. Distinguish between sand flies (Phlebotominae) and black flies (Simuliidae) (10 Marks)
- ii. Describe diseases transmitted by these two types of flies and their control. (15 Marks)

Question 6:

Appraise the medical importance of mites (Sub orders: Astigmata and Prostigmata). (25 Marks)