



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

UNIVERSITY EXAMINATIONS 2012/2013

**2ND YEAR 2ND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN COMMUNITY
HEALTH AND DEVELOPMENT & BACHELOR OF SCIENCE
IN PUBLIC HEALTH**

(KISUMU LEARNING CENTRE)

COURSE CODE: HCD 3227

COURSE TITLE: MEDICAL ENTOMOLOGY

DATE: 21/4/2013 TIME: 11.00-13.00PM

DURATION: 2 HOURS

INSTRUCTIONS

1. This paper contains TWO sections.
2. Answer ALL questions in section A (Compulsory) and ANY other Two questions in section B.
3. Write all answers in the booklet provided.

SECTION A: answer ALL questions in this section. (3 Marks each)

1. What is a vector of a disease
2. Briefly explain passive inoculation of parasites by vectors
3. What is a half gravid vector
4. Explain the term oviposition
5. List 3 methods that could be used to determine the infectivity of vectors
6. Explain the term zoophily as applied to vectors
7. Which vector transmits the following disease (i) trachoma (ii) dengue fever (iii) yellow fever
8. Briefly explain molting in vectors
9. What is metamorphosis
10. List two ways in which vectors could be identified.

SECTION B: Answer any TWO questions from this section (20 marks each)

1. Explain how the anatomy and morphology of vectors adapt them to their disease transmission functions
2. Discuss five (5) methods that you will use to control vectors in an area, explaining which method you will use for a named situation and the type of vectors.
3. To identify vectors that are transmitting diseases in a particular community, what are some of the methods you will use to collect these disease transmitting vectors and why will you use those methods
4. To estimate the malaria transmission intensity in Ahero and Miwani, a public health person sampled mosquitoes for a period of one year by himself. The results of the sampling are shown in the table below.

Site	No. of Culicines	No. of Anopheles gambiae	No. of An. gambiae with sporozoites	No. of Anopheles arabiensis	No. of An. arabiensis with sporozoites
Ahero	880	37	12	137	78
Miwani	470	435	121	101	14

Calculate the Entomological Inoculation Rate, explaining all the steps with equations how you arrived at your answer and explain which of the two sites has a higher intensity of malaria transmission.