



AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

BACHELOR OF SCIENCE IN COMMUNITY HEALTH

END OF SEMESTER EXAM APRIL 2026

UNIT CODE: CHP 133

UNIT NAME: ENTOMOLOGY

DATE: 14TH APRIL 2026

TIME: Two Hours

Start: 11:15AM

Stop: 1:15PM

INSTRUCTIONS

1. This exam is marked out of 70 marks.

2. This Examination comprises TWO Sections:

- Section A: Compulsory Question (30 marks)
- Section B: Long Answer Questions (40 marks)

SECTION A: COMPULSORY (30 Marks)

Short Answer Questions

1.

- a) Define the following terms as used in relation to arthropod vectors and give **ONE** example of each.
- (i) Mechanical transmission
 - (ii) Cyclopropagative transmission (6 Marks)
- b) List **4** arthropods of medical significance that undergo **Complete** metamorphosis (4 Marks)

2.

- a) Differentiate between **Incomplete metamorphosis** and **Gradual metamorphosis** (4 Marks)
- b) List **Two 2** diseases transmitted by *Anopheles gambiae* (2 Marks)
- c) List **Two (2)** diseases transmitted by mosquitoes of the genus *Aedes* (2 Marks)
- d) List **Two (2)** diseases transmitted by the female *Phlebotomus papatasi* (Sandfly) (2 Marks)

3.

- a) *Musca domestica* is capable of mechanically transmitting pathogens. Give **One (1)** example of such pathogens: - (4 Marks)
- i) Protozoan
 - ii) Bacterial
 - iii) Viral
 - iv) Helminth
- b) The class Insecta has four orders of medical importance to which orders do the following vectors belong? (4 Marks)
- (i) *Culex quinquefasciatus*
 - (ii) *Pulex irritans*
- c) Give **Two (2)** examples of **External myiasis** (2 Marks)

Section B: Answer ONLY 2 Questions in Section B (40 Marks)
(Each question in Section B has 20 Marks)

4)

- a) For each of the following state a pathogen and disease it transmits
 - (i) *Xenopsylla cheopis* (2 Marks)
 - (ii) *Simulium damnosum* (2 Marks)
 - (iii) *Culex fatigans* (2 Marks)
 - (iv) *Glossina morsitans* (2 Marks)
- b) State and explain **Three** strategies that can be used to control vectors of the class Insecta (6 Marks)
- c) State and explain **Three** types of biological transmission (6 Marks)

5)

- a) Cyclops or water fleas belong to the Pylum Arthropoda and class Crustacea
 - (i) State **Two** diseases associated with cyclops (2 Marks)
 - (ii) State **Three** strategies that can be used to control cyclops (6 Marks)
- b) List **Two** members of the order diptera associated with Myiasis (4 Marks)
- c) State and explain the life cycle of *Anopheles spp* mosquito (8 Marks)

6)

- a) State the **vector** and **pathogen** responsible for tick-bite fever (4 Marks)
- b)
 - (i) Describe the geographical distribution of sandfly (4 Marks)
 - (ii) List **Four** possible habitats of the vector associated with Kalaazar (Visceral leishmaniasis in Kenya) (4 Marks)
- c)
 - (i) State **Two** diseases associated with *Pediculus corporis* (2 Marks)
 - (ii) State the vector associated with American Trypanosomiasis (2 Marks)
 - (iii) State the vector associated with transmission of *Oncocerca volvulus* causing river blindness (2 Marks)
 - (iv) State **Two (2)** methods that can be used to control *Glossina palpalis* (2 Marks)