



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF SCIENCE IN PUBLIC HEALTH

HEH 216 : PUBLIC HEALTH ENTOMOLOGY

DATE: 14/3/2022

TIME : 2:00 – 4:00 PM

INSTRUCTIONS

1. Answer Question 1 (**compulsory**) and **any two** questions
2. Use clean well labelled diagrams wherever appropriate.

1. – Compulsory (30 marks)

- a) Explain the important items on the label of an insecticide for use in Kenya (3 marks)
 - b) Explain how insecticides may be stored safely in homesteads (3 marks)
 - c) Outline the life cycle of the tsetse fly *Glossina longipennis* Corti (3 marks)
 - d) Explain the concept of “management” of a population of medical disease vector (3 marks)
 - e) Explain the vectors of the disease pediculosis (3 marks)
 - f) Outline the transmission of a disease by the vector *Phlebotomus martini* (3 marks)
 - g) Outline three factors that affect the vectorial capacity of Anopheles mosquitoes (3 marks)
 - h) With examples, outline the characteristics of the order Siphonaptera (3 marks)
 - i) Explain the economic importance of the dog flea *Ctenocephalidus canis* to man (3 marks)
 - j) Explain how use of insecticide treated bednets assist in managing malaria (3 marks)
- 2 a. Discuss the economic importance of *Culex quinquefasciatus* in Kenya 10 marks
b. Explain how the house fly *Musca domestica* is of public health concern 10 marks
 - 3 Compare the life cycles of the mosquito *Anopheles gambiae* with that of the tsetse fly *Glossina pallidipes* 20 marks
 - 4 Discuss MDT in the management of a disease of medical importance 20 marks
 - 5 a. Discuss the causes and transmission of human trypanosomiasis 10 marks
b. Discuss the economic importance of rodents 10 marks