



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN COMMUNITY HEALTH
BSCH 13J

APH 4201 : VECTOR AND PEST CONTROL

SUPPLEMENTARY/SPECIAL : EXAMINATION

MARCH 2014 SERIES

2 HOURS

Instructions to candidates:

This paper consists of **FIVE** questions

Answer question **ONE** (compulsory) and any other **TWO** questions

QUESTION ONE

- a) Onchocerciasis or river blindness is the disease transmitted by the female black fly:
- (i) What is the causative agent of this disease? **(1 mark)**
 - (ii) What are the symptoms of Onchocerciasis **(3 marks)**
 - (iii) Describe prevention and control measures of onchocerciasis **(3 marks)**
 - (iv) Describe the factors affecting the distribution of house flies **(3 marks)**
- b) (i) Schistosomiasis is transmitted by different vector snails that are found in different snail habitats. Modification of the habitats makes them unsuitable for their breeding. Describe three of the methods used **(6 marks)**
- State the two most important factors in transmission of trypanosomiasis.

(2 marks)

- (ii) Describe four control measures that worked be employed for control of trypanosomiasis **(8 marks)**
- c) List four features that can be used to differentiate Anopheles adult mosquito from culex adult mosquito **(4 marks)**

QUESTION TWO

- a) Indoor residual spraying (IRS), spraying of resting sites of sylvatic species , use of insecticide- impregnated materials (IIm) such as bednets and cultures , and parathyroid impregnated dog collars are the chemical control methods for control of sand flies. Describe the factors one should considered before choosing one or combination of the above methods. **(10 marks)**
- b) Describe the transmission route for schistosomiasis and list the possible control technique for it **(5 marks)**
- c) A steep decline in malaria transmission has been reported across sub-sahara Africa in the last one decade. Explain the control and prevention measures associated with this decline **(5 marks)**

QUESTION THREE

- a) List the vectors for chikungunye fever **(2 marks)**
- b) Describe the urban transmission cycle of chikungunye fever **(8 marks)**
- c) Assuming you were the vector control officers for Mombasa County during the 2005 chikungunye fever outbreak. Describe step by step the measures you would have put in place to minimize the spread of the disease. **(10 marks)**

QUESTION FOUR

- a) The best strategies for control of house flies are those that involve improving environmental sanitation and hygiene. Discuss four of these strategies. **(8 marks)**
- b) (i) Which of the three human lice species transmits a disease? **(1 mark)**
- (ii) Name diseases transmitted by human lice **(3 marks)**

(iii) Discuss the public health importance of bedbugs

(3 marks)

QUESTION FIVE

a) Pesticides are toxic to both pests and human. However, they need not be hazardous to humans and non-target animal species. Discuss five precautionary measures when handling pesticides **(10 marks)**

b) House improvement is one of the methods used in the control of vector-borne diseases. Discuss its application in reference to the following vectors and pests:

(i) Mosquitoes

(5 marks)

(ii) Rodents

(5 marks)