MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR BACHELOR OF SCIENCE IN PUBLIC HEALTH

PPH 216: PUBLIC HEALTH ENTOMOLOGY

DATE: 31/7/2019 **TIME: 2.00-4.00 PM**

INSTRUCTIONS

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

1. a) Classify insecticides based on their mode of action (3 marks)

b) With the use of an example, outline the characteristics of members of the class Siphonaptera (3 marks)

c) Explain the economic importance of the dog flea *Ctenocephalidis canis* to man (3 marks)

d) Explain the effectiveness of the use of bednets in the management of malaria (3 marks)

e) Explain three of the most essentials items on the label of an inseticide in Kenya (3 marks)

f) Explain the safe storage of insectidies of public health importance at home (3 marks)

g) Explain "adenotrophic viviparity" (3 marks)

h) Explain the concept of "management" of a population of medical disease vector (3 marks)

i) Complete the table below by filling in the blanks (6 marks)

Disease	Transmitted by		Taxonomic class of vector
	Common name	Scientific name	
1. Pediculosis			
2.		*Phlebotomus martini*	
3. Filariasis			
4. Chagas disease			

2 a. Explain the process of registration of pest control produt for use in Kenya (10 marks)

b. Discuss the factors that affect the vectorial capacity of an insect (10 marks)

3 Compare the life cycles of the mosquito *Anopheles gambiae* with that of the tsetse fly *Glossina pallidipes* (20 marks)

4 Explain the components of the "Sterile Insect Technique" in the management of a named disease vector of medical importance (20 marks)

5 a. Discuss the Rotterdam Convention (10 marks)

b. Discuss an effective rodent control program in an infested rural estate (10 marks)