



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL SCIENCES

PPH 216 ENVIRONMENTAL PARASITOLOGY

DATE: 26/9/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS

1. Answer Question 1 (**compulsory**) and **any other two** questions
 2. Use clean well labelled diagrams wherever appropriate.
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1.
 - a) Explain why man not suffer from malaria even after being fed on by female anopheles mosquitoes (3 marks)
 - b) Briefly explain how typanosomes evade the immune system of the human host (3 marks)
 - c) Briefly discuss the transmission and management of *Ascaris lumbricoides* (3 marks)
 - d) Briefly explain the exo-erythrocytic life cycle of the malaria parasite (3 marks)
 - e) Distinguish between the following:
 - i. *chemotherapy* and *chemoprophylaxis* (2 marks)
 - ii. *Intermediate* and *paratenic* host (2 marks)
 - iii. *Salivarian* and *stercorarian* disease transmission (2 marks)
 - f) Outline three factors that could lead to failure of cure of a patient following chemotherapy against the malaria parasite (3 marks)
 - g) Outline the adaptations to a parasitic mode of life of the endoparasitic liver fluke *Fasciola hepatica* (3 marks)
 - h) Outline the responses of the parasite to the host after and during an infection (3 marks)
 - i) Explain the concept “plaeomorphism” (3 marks)
 2.
 - a. Explain the various modes of reproduction exhibited by *Plasmodium falciparum*. 10 marks
 - b. Explain why malaria still remains ranks highly as a human killer disease despite the advances in knowlegde on effective methods of its management 10 marks
 - 3 Discuss how you would manage infections by *schistosoma mansoni* in a primary school located at Mwea rice irrigation scheme 20 marks
 - 4 Discuss the mechanisms of response of a human body following following infection by an endoparasite. 20 marks
 5.
 - a. Discuss the complications of chemotherapy against Human African Trypanosomiasis 10 marks
 - b. Using specific examples, distinguish between direct and indirect transmission of diseases of medical importance 10 marks