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**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATIONS 2018/2019**

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF  
MASTER OF SCIENCE IN PARASITOLOGY AND ENTOMOLOGY  
TPE 3101: MEDICAL HELMINTHOLOGY

**REVISED VERSION**

DATE: September 2019

TIME: 3 HOURS

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INSTRUCTIONS: Answer ANY FOUR Questions (25 Marks for Each Question)

1. (a) A number of parasitic helminth infections can be considered as rare, emerging or re-emerging. Identify **one** example for each category, and briefly describe the epidemiological circumstances that have led to them being referred to as rare, emerging or re-emerging (15 Marks).  
  
(b) Some parasitic helminth infections are grouped among the "Neglected Tropical Diseases (NTDs)". Explain why such diseases are considered as "Neglected" and describe the common features of the NTDs. Name 2 helminth infections that are categorized as NTDs (10 Marks).
2. (a) Describe the basic characteristics of gastropod snails of public health significance in the East African region including the taxonomic classification, morphological and anatomical features often used to identify these snails, and state the roles these snails play in the epidemiology and transmission of trematode infections (15 Marks).  
  
(b) Describe the biotic factors that may influence the local distribution of gastropod snails of public health importance in sub-Saharan Africa (10 Marks)
3. Name **one** pseudophyllid cestode infection of public health significance and describe its transmission and epidemiology (25 Marks)
4. Discuss filariasis epidemiology and transmission in Kenya (25 Marks)
5. Describe the life cycle of hookworms and epidemiology of hookworm infections (25 Marks)
6. Describe (a) nutrient acquisition in a named nematode species of public health importance (15 Marks), (b) the energy metabolism in *Schistosoma mansoni* (10 Marks)