

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR  
OF BIOMEDICAL SCIENCE AND TECHNOLOGY

BMET 233: MEDICAL HELMINTHOLOGY

STREAMS: Y2S2

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 18/04/2018

11.30 A.M. – 1.30 P.M.

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INSTRUCTIONS:

- Answer question ONE (COMPULSORY) and any other TWO questions.
- Sketch diagrams may be used whenever they may help to illustrate your answer.
- Do not write anything on the question paper.
- This is a closed book exam. No reference materials are allowed in the examination room.
- There will be NO use of mobile phones or any other unauthorized materials.

QUESTION ONE (30 MARKS)

- (a) Explain the following terms in medical helminthology. (5 marks)
- Definitive host
  - Obligate parasite
  - Infective stage
  - Hyperinfection
  - Parathenic vectors
- (b) Discuss the prevention and control of *Taenia species*. (6 marks)
- (c) Explain the mode of transmission of *Hymenolepis nana*. (2 marks)
- (d) Identify the common name of the following parasites. (5 marks)
- Ascaris lumbricoides*
  - Enterobius vermicularis*
  - Strongyloides stercoralis*
  - Necator americanus*
  - Trichuris trichura*

- (e) Classify the medical importance parasites according to their pathogenicity and give an example in each case. (6 marks)
- (f) Discuss the distribution, habitat and the morphology of *Hymenolepis nana*. (6 marks)

**QUESTION TWO (20 MARKS)**

- (a) With an aid of a suitable diagram, illustrate the life cycle of *Taenia species*. (9 marks)
- (b) Differentiate the following terms applied in medical helminthology. (6 marks)
  - (i) Biological vectors and mechanical vectors.
  - (ii) Commensalism and parasitism
  - (iii) Autoinfection and retroinfection
- (c) Discuss the direct mode of transmission of the helminthes of medical importance. (5 marks)

**QUESTION THREE (20 MARKS)**

- (a) Illustrate the life cycle of the parasitic agents responsible for causing schistosomiasis in man. (10 marks)
- (b) Discuss the effects of helminthic parasites on their hosts. (5 marks)
- (c) With a use of examples of parasites, identify different types of specimens used for parasitological examination. (5 marks)

**QUESTION FOUR (20 MARKS)**

- (a) With the aid of a suitable diagram, discuss the lifecycle of the *Strongyloides stercoralis*. (10 marks)
  - (b) Medically, the important helminthes are classified as metazoan. Illustrate the major differences between parasitic protozoa and metazoan. (5 marks)
  - (c) Discuss the laboratory diagnosis of *T. saginata* and *T. solium* and their pathology. (5 marks)
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