



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

(MAIN CAMPUS)

**UNIVERSITY EXAMINATIONS (MAIN PAPER)  
2021/2022 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES**

**COURSE CODE:** BML 321

**COURSE TITLE:** MEDICAL HELMINTHOLOGY

**DATE:** 20/04/2022

**TIME:** 8.00 -10.00 am

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**INSTRUCTIONS TO CANDIDATES**

This paper is divided into three sections, **A**, **B** and **C**, carrying respectively: Multiple Choice Questions (**MCQs**), Short Answer Questions (**SAQs**) and Long Answer Questions (**LAQs**). **Answer all questions. DO NOT WRITE ON THE QUESTION PAPER.**

**TIME: 2 Hours**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over

**SECTION A: Multiple Choice Questions (MCQs – 20 Marks)**

1. The common name for *Trichuris trichiura* is \_\_\_\_\_
  - A. Hookworm
  - B. Threadworm
  - C. Whipworm
  - D. Seat worm
2. This nematode is an important cause of anemia in developing countries.
  - A. *Trichuris trichiura*
  - B. *Trichinella spiralis*
  - C. *Ancylostoma duodenale*
  - D. *Enterobius vermiculus*
3. The larval stage found in *Hymenolepis* species is \_\_\_\_\_
  - A. Cercocystis
  - B. Cysticercus
  - C. Hydatid
  - D. Coenurus
4. The drug commonly used for the treatment of filarial worms is \_\_\_\_\_
  - A. Antimony potassium tartrate
  - B. Praziquantel
  - C. Hetrazan
  - D. Piperazine
5. The method most often used in the diagnosis of the ancylostomiasis is \_\_\_\_\_
  - A. Direct fecal smear
  - B. Formol-Ether concentration technique
  - C. Saturated Brine floatation technique
  - D. Hatching-sedimentation technique
6. *Diphyllobothrium latum* plerocercoid head is known as \_\_\_\_\_
  - A. Rostellum
  - B. Proceroid
  - C. Cercomer
  - D. Scolex
7. The infective stage of Hookworms is \_\_\_\_\_
  - A. Ova containing the 4 blastomeres
  - B. Rhabditiform larva
  - C. Filariform larva
  - D. Egg in the 4-cell stage of cleavage
8. *Mf. bancrofti* and *Mf. malayi* can be differentiated by \_\_\_\_\_
  - A. Length, appearance and terminal nuclei
  - B. Length, body nuclei and cephalic space
  - C. Terminal nuclei, cephalic space and length
  - D. Body nuclei, terminal nuclei and cephalic space
9. The main method for the diagnosis of filarial worms is \_\_\_\_\_

- A. Thin blood film technique
  - B. Intradermal test
  - C. Lymph node biopsy
  - D. Thick blood film technique
10. Ability of a pathogen to invade and establish in an organism is \_\_\_\_\_
- A. Infestation
  - B. Disease
  - C. Infection
  - D. Pathology
11. These platyhelminths are monoecious.
- A. Liver flukes
  - B. Lung flukes
  - C. Blood flukes
  - D. Intestinal flukes
12. The main cause of Schistosomiasis pathology are \_\_\_\_\_
- A. Developing eggs in circulation
  - B. Cercariae penetrating the skin
  - C. Mature eggs
  - D. Schistosomules
13. Nutrition in platyhelminths is usually through \_\_\_\_\_
- A. Mesenchymal cells
  - B. Complex branched tubule system
  - C. A metabolically active tegument
  - D. Bladder worm cells
14. The larval stage of *Echinococcus granulosus* is \_\_\_\_\_
- A. Oncosphere
  - B. Embrophore
  - C. Hydatid cyst
  - D. Coracidium
15. Epilepsy and mental disorder as a result of tapeworm infection is caused by \_\_\_\_\_
- A. Hydatid cyst
  - B. Spargunum
  - C. *Cysticercus cellulosae*
  - D. Coenorous
16. The mode of infection for *Trichinella spiralis* is \_\_\_\_\_
- A. Ingestion of eggs containing embryos/larvae
  - B. Ingestion of pork containing encysted larvae
  - C. Ingestion of beef/muscle containing encysted larvae
  - D. Ingestion of pork containing cysticerci
17. The method used to diagnose pork tapeworm infection is \_\_\_\_\_
- A. Direct fecal smear
  - B. Saturated brine floatation method
  - C. Identification of gravid segments in feces
  - D. Hatching-sedimentation method
18. Larval multiplication stages can be found in \_\_\_\_\_

- A. Hookworm
  - B. Pork tapeworm
  - C. Hydatid cyst
  - D. Filarial
19. The following nemathelminth is both somatic and intestinal.
- A. *Ascaris lumbricoides*
  - B. *Enterobius vermicularis*
  - C. *Strongyloides stercoralis*
  - D. *Wuchereria bancrofti*
20. Mechanisms through which infectious agents cause disease is \_\_\_\_\_
- A. Active penetration
  - B. Active reaction with the body systems
  - C. Vascular obstruction
  - D. Passive penetration through the body tissues.

**SECTION B: Short Answer Questions (40 Marks)**

- 1. State the laboratory diagnosis for *Dracunculus medinensis* (8mks)
- 2. Explain the laboratory diagnosis for *Mf. bancrofti* (8mks)
- 3. Differentiate between hookworm and *Strongyloides* species larvae (8mks)
- 4. Distinguish between *T. saginata* and *T. solium* proglottids (8mks)
- 5. Explain urine sedimentation method for the diagnosis of *S. hematobium* (8mks)

**SECTION C: Long Answer Questions (60 Marks)**

- 1. Describe the Ritchie's Formol-Ether stool concentration technique. (20mks)
- 2. Discuss the control of Schistosomiasis as a neglected tropical disease. (20mks)
- 3. Describe the six stage life cycle of *Ascaris lumbricoides*. (20mks)