



**TECHNICAL UNIVERSITY OF MOMBASA**

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FACULTY OF APPLIED AND HEALTH SCIENCES  
DEPARTMENT OF ENVIROMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:**  
BCHALOR OF SCIENCE IN MEDICAL LABORATORT SCIENCES

AML 4209 : **MEDICAL HELMINTHOLGY II**

END OF SEMESTER EXAMINATION

**SERIES:** AUGUST 2017

**TIME:** 2 HOURS

**DATE:** 25 JULY 2017

**Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt ALL questions.

**Circle the correct answer in section A.**

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PAPER 1

Section A (30 Marks)

1. Examination of a 24-hour unpreserved urine specimen is sometimes helpful in the recovery of ?

- a). *Trichomonas vaginalis* trophozoites
- b). *Schistosoma haematobium* eggs
- c). *Enterobius vermicularis* eggs
- d). *Strongyloides stercoralis* larvae
- e). *Ascaris lubricoides*

2. The examination of sputum and stool may be necessary to diagnose infection with:

- a). *Paragonimus westermani*
- b). *Trichinella spiralis*
- c). *Wuchereria bancrofti*
- d). *Fasciola hepatica*
- e). *Giasdia lamblia*

3. Anti-helminthic are used to treat what type of infection/infestation?

- a). Fleas and Ticks
- b). Protozoans
- c). Insects
- d). Cestodes and trematodes
- e). Insects

4. Eating poorly cooked pork can lead to an infection with

- a). *Taenia solium* and *Trichinella spiralis*
- b). *Taenia saginata* and *Hymenolepis nana*
- c). *Trichuris trichiura* and *Hymenolepis diminuta*
- (d). *Diphyllobothrium latum* and *Ascaris lumbricoides*
- e). *Taenia solium* and *Trichiura*

5. Pigs are the source of human infection by each of the following parasites except:

- (a) *Taenia solium*
- b) *Ascaris lumbricoides*
- c) *Trichinella spiralis*
- d) *Ascaris suum*
- e) *Echinococcus granulosus*

6. Which of the following parasites are diagnosed by use of xenodisgnosis?

- (a) *Strongyloides stercoralis*
- (b) *Schistosoma mansoni*
- c) *Trichinella spiralis*
- d) *Ascaris lumbricoides*
- e) *Trichuris trichiura*

7. Which one of the following parasites has more than two host to complete its lifecycle

- a) *Ascaris lumbricoides*
- b) *Enterobius vermicularis*
- c) *Trichuris trichiura*
- d) *Paragonimus westermani*
- (e) *Trichuris trichiura*

8. How is the intermediate flea host of *Dipylidium caninum* infected?

- a). Hatched larvae penetrate through the adult flea exoskeleton
- b.) Hatched larvae penetrate through the larval flea exoskeleton
- c). Hatched larvae are engested by the adult flea
- (d). Eggs still within their gravid proglottids are engested by larval fleas
- e). Eggs released from their gravid proglottids are engested by adult fleas

9. Which of the following is the first larval stage of trematodes?

- a) Schistosomulum
- (b) Miracidia
- (c) Cercariae
- (d) Metacercariae
- (e) Adult

10. The following are advantages of using formalin in preparation of stool samples except

- a) Easy to prepare
- b) Good overall fixative
- c) Long shelf life
- d) Preserves trophozoites well
- (e) Short half life

11. The adult worm of *Clonorchis sinensis* is most frequently found in the following

- a). Intrahepatic bile duct
- b). Lung parenchyma

- c). Urinary bladder submucosa
- d). Lumen of intestine
- e). Urinary mucosa

12. Which parasite from the list below has been associated with the development of pernicious anemia?

- a). *Diphyllobothrium latum*
- b). *Echinococcus granulosus*
- c). *Spirometra mansonioides*
- d). *Schistosoma haematobium*
- e). *Schistosoma mansoni*

13. Which of the following is the drug of choice for treatment against *Schistosoma* adults

- a). Mebendazole
- b). Albendazole
- c). Arecoline hydrobromide
- d). Bunamidine hydrochloride
- e). Praziquantel

14. Which of the following parasite species of Schistosomes that lodges in the mesenteric veins of intestines and cause erosions of G.I.T

- a) *Schistosoma metheei*
- b) *Shistosoma japonicum*
- c) *Schistosoma haematobium*
- d) *Schistosoma bovis*
- (e) *Shistosoma rhodiani*

15 The pathological changes in Schistosomiasis are caused mainly by:

- a). immature eggs.
- b). Mature eggs.
- c). Adult worm
- d). Adult worm
- e). Schistosomulum

16. A parasite that has a wide range of hosts is described as being

- a). Monoxenous
- b). Euryxenous
- c). Stenoxenous
- d). Homoxenous
- e). xenous

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- e). *Paragonimus westermani*

18. Name the giant intestinal fluke

- a). *Fasciolopsis buski*
- b). *Giardia Lamblia*
- c). *Fasciolopsis hepatica*
- d). *Opisthorchis sinensis*
- e). *Chronochis sinensis*

19 Which of the following requires two intermediate hosts to complete its life cycle?

- a) *Taenia solium*

- b) *Diphyllobothrium latum*
- (c) *Hymenolepis nana*
- d) *Taenia saginata*
- e) *Ascaris lumbricoides*

20 All of the following are hepatic flukes except?

- a) *Fasciola hepatica*
- b) *Fasciola gigantica*
- c) *Metagonimus yokogawi*
- d) *Dicrocoelium dentriticum*
- e) *Chronorchis sinensis*

21. All of the following are intra hepatic flukes except?

- a) *Fasciola hepatica*
- b) *Metagonimus yokogawi*
- c) *Dicrocoelium dentriticum*
- d) *Chronorchis sinensis*
- e) *D. latum*

22. Crab is the intermediate host for

- a). *Schistosoma mansoni*
- b). *Schistosoma japonicum*
- c). *Clonorchis sinensis*
- d). *Paragonimus westerman*
- e). *Schistosoma haematobium*

23. Undulating waves of contraction and relaxation of muscles helps trematodes in Which process

- a). excretion

- b). digestion
- c). reproduction
- d). locomotion

a. all of Above

24. In mode of transmission for *Schistosoma mansoni*, penetration is in

- a). Mucous
- b). Intestine
- c). Skin
- d). Blood
- e). Intestine

25 Which of the following is the dog tapeworm?

- a) *Hymenolepis nana*
- b) *D. latum*
- c) *Hymenoleptis dimunita*
- d) *Enchinococcus granulosus*
- e) *Taenia solium*

26. The eggs of the following *Schistosoma* sp are elongate and have a prominent lateral spine are

- a). *S. mansoni*
- b). *S. japonicum*
- c). *S. haematobium*
- d). *S. intercalatum*
- e) *S. Chaompala*

27. Snails are both the first and second intermediate hosts of the following trematodes

- a). *Echinostoma ilocanum*
- b). *Fasciola hepatica*

- c). *Paragonimus westermani*
- d). *Fasciola hepatica*
- e) *Clonorchis sinensis*

28. The infective stage of the following parasite is found in crabs.

- a). *Fasciola hepatica*
- b). *Echinostoma ilocanum*
- c). *Clonorchis sinensis*
- d) *Paragonimus westermani*
- e) *Taenia saginata*

29. A freshwater snail is always a part of the life cycle in which of the following groups?

- a). Cestodes
- b). Trematodes
- c). Filarial worms
- d). Blood flukes
- e). Intestinal nematodes

30. A dog that chases and eats wild rabbits is most likely to become infected with which cestode?

- a). *Echinococcus granulosus*
- b). *Taenia saginata*
- c). *Diphyllobothrium latum*
- d). *Dipylidium caninum*
- e). *Hynolepis nana*

Section B 40 Marks **Answer all the questions**

31. Briefly discuss *Taenia saginata* infection in man? (10 marks)

32. Describe the lifecycle of *Fasciola hepatica* (10 marks)



33. a). Describe the lifecycle of *Schistosoma mansoni*? (10 marks)

b) Outline the Kato Katz method in parasite quantification (10 marks)