



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF MEDICAL SCIENCES
UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES
BACHELOR OF SCIENCE IN COMMUNITY HEALTH

AML 4209 : MEDICAL HELMINTHOLOGY
END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date May 2016

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.

PAPER 1

Section A

1. Snails serve as intermediate hosts of which of the following parasites?

- (a) *Enterobius vermicularis*
- (b) *Echinococcus granulosus*
- (c) *Schistosoma mansoni*
- (d) *Wuchereria bancroft*
- (e) *Taenia solium*

2. Humans can serve as the *intermediate* host of which of the following parasites?

- (a) *Taenia solium*
- (b) *Taenia saginata*
- (c) *Echinococcus multilocularis*
- (d) *Spirometra spp.*
- (e) *Clonorchis sinensis*

3. Which of the following parasites are diagnosed by muscle biopsy?

- (a) *Ancylostoma duodenale*
- (b) *Trichuris trichiura*
- (c) *Trichinella spiralis*
- (d) *Strongyloides stercoralis*
- (e) *Wuchereria bancroft*

4. The following statements concerning hookworm infection are correct except

- (a) Hookworm infection can cause pneumonia
- (b) Hookworm infection is acquired by active penetration
- (c) Diagnosed by finding the trophozoite in the stool
- (d) Hookworm infection is caused by *Necator americanus*
- (e) Hookworm infection is caused by *Acylostoma duodenale*

5. Pigs or dogs 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 xenodiagnosis?

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

7. 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. The following is the first larval stage of trematodes

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

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 following nematode is not acquired through ingestion of infective eggs

- (a) *Ascaris lumbricoides*
- (b) *Hookworm*
- (c) *Trichuris trichiura*
- (d) *Enterobius vermicularis*
- (e) *Trichinella spiralis*

12. The drug of choice in the treatment of *Ascaris lumbricoides* is

- (a) Metronidazole
- (b) Abendanzole
- (c) Piperazine
- (d) Chloroquine
- (e) Tinidazole

13. The drug of choice for treatment against *Schistosoma* adults is?

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

14. The following statements concerning *Ascaris lumbricoides* are correct except?

- (a) *Ascaris lumbricoides* is one of the largest nematode
- (b) *Ascaris lumbricoides* can cause pneumonia
- (c) Both dogs and cats are intermediate host of *Ascaris lumbricoides*
- (d) *A lumbricoides* is transmitted by ingestion of egg
- (e) They segmented

15 Which of the following parasite species of Schistosomes 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*

16 The pathological changes in Schistosomiasis are mainly caused by:

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

(e). *Schistosomulum*

17 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). *Paragonimus westermani*

18 The region of growth in Cestodes is the -----

(a). *Scolex*

(b). *Neck*

(c). *Strobila*

(d). *Proglotid*

(e). *Mouth*

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 The following are hepatic flukes except?

(a) *Faciola hepatica*

- (b) *Fasciola gigantica*
- (c) *Metagonimus yokogawi*
- (d) *Dicrocoelium dentriticum*
- (e) *Chronechis sinensis*

21. What is the method of choice for demonstrating pinworm infection?

- (a). Ova and parasite exam of stool
- (b). Ova and parasite exam of sputum
- (c). Scotch tape preparation from perianal area
- (d). Serological testing
- (e) Electrophoresis

22 The following worm belong to class Nematelminths:

- a) *Hymenolepis nana*
- b) *Dipylidium caninum*
- c) *Echinococcus granulosus*
- d) *Opistorchis felinus*
- e) *Trichuris trichiura*

23 Which one of the following is not a soil transmitted helminth?

- (a) *Ascaris lumbricoides*
- (b) *Hookworm*
- (c) *Trichuris trichiura*
- (d) *Enterobius vermicularis*

(e) *Trichinella spiralis*

24 Which one of the following parasites are associated with occult gastrointestinal bleeding and iron deficiency;

- a) Hookworms
- b) *Trichuris trichiura*
- c) *Strongyloides stecoralis*
- d) *Trichinella spiralis*
- e) *Loa loa*

25 Which of the following is the dog tapeworm?

- (a) *Hymenolepis nana*
- (b) *Diphyllobothrium latum*
- (c) *Hymenolepis diminuta*
- (d) *Enchinococcus granulosus*
- (e) *Taenia solium*

26. For filarial nematodes, what key characteristic of the microfilarial form is/are used to identify them?

- (a). Sheathed or unsheathed
- (b). Distribution of nuclei within its tip
- (c). Length of buccal cavity
- (d) Morphology
- (e) Size

27. Worldwide, the most prevalent helminth to infecting humans is:

- (a) *Ascaris lumbricoides*
- (b) *Hookworm*
- (c) *Trichuris trichiura*
- (d) *Enterobius vermicularis*
- (e) *Schistosoma mansoni*

28. Humans are infected by eating improperly cooked pork containing the following

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

29. Which one of the following parasites causes rectal prolapse

- (a) *Ascaris lumbricoides*
- (b) *Trichuris trichiura*
- (c) *Enterobius vermicularis*
- (d) *Strongyloides stercoralis*
- (e) Hookworms

30. Which one of the following is the infective stage of schistosomes?

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

B Answer all the questions 40 marks

31.a) Discuss *Fasciolopsis buski* infection in man? (15 marks)

b). Outline the control strategies for prevention of *Ascaris lumbricoides* infection (5 marks)

32 a). Outline the lifecycle of *Enterobius vermicularis* (5 marks)

33. a). Describe the lifecycle of *Strongyloides stercoralis* (10 marks)

b). Outline the diagnosis of *Trichinella spiralis* disease (5 marks)