



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 bancrofti*
- (e) *Taenia solium*

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

- (a) *Taeniasolium*
- (b) *Taeniasaginata*
- (c) *Echinococcusmultilocularis*
- (d) *Spirometra spp.*
- (e) *Clonorchissinensis*

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

- (a) *Ancylostomaduodenale*
- (b) *Trichuristrichiura*
- (c) *Trichinellaspiralis*
- (d) *Strongyloidesstercoralis*
- (e) *Wuchereriabancroft*

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 *Necataramericanus*
- (e) Hookworm infection is caused by *Acylostomaduodenale*

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

- (a) *Taeniasolium*
- (b) *Ascarislumbricoides*

(c) *Trichinella spiralis*

(d) *Ascarissuum*

(e) *Echinococcusgranulosus*

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

(a) *Strongyloidesstercolaris*

(b) *Shistosomamansoni*

(c) *Trichinellaspiralis*

(d) *Ascarislumbricoides*

(e) *Trichuristrichiura*

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

(a) *Ascaris lumbricoides*

(b) *Enterobiusvermicularis*

(c) *Trichuristrichiura*

(d) *Paragonimuswestermani*

(e) *Trichuristrichiura*

8. How is the intermediate flea host of *Dipylidiumcaninum* 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) Abendazole
- (c) Piperazine
- (d) Chloroquine
- (e) Tinidazole

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

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

14. The following statements concerning *Ascarislumbricoides* are correct except?

- (a) *Ascarislumbricoides* is one of the largest nematode
- (b) *Ascarislumbricoides* can cause pneumonia
- (c) Both dogs and cats are intermediate host of *Ascarislumbricoides*
- (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) *Schistosomametheei*
- (b) *Shistosomajaponicum*
- (c) *Schistosoma haematobium*
- (d) *Schistosoma bovis*
- (e) *Shistosomarhodiani*

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). *Diphyllobothriumlatum*

(b). *Echinococcusgranulosus*

(c). *Spirometramansonoides*

(d). *Schistosoma haematobium*

(e). *Paragonimuswestermani*

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) *Taeniasolium*

(b) *Diphyllobothriumlatum*

(c) *Hymenolepis nana*

(d) *Taeniasaginata*

(e) *Ascarislumbricoides*

20 The following are hepatic flukes except?

(a) *Faciolahepatica*

- (b) *Fasiolagigantica*
- (c) *Metagonimusyokogawi*
- (d) *Dicrocoeliumdentrtricum*
- (e) *Chronechissinensis*

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) *Dipylidiumcaninum*
- c) *Echinococcusgranulosus*
- d) *Opistorchisfelineus*
- e) *Trichuristrichiura*

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

- (a) *Ascaris lumbricoides*
- (b) *Hookworma*
- (c) *Trichuristrichiura*
- (d) *Enterobiusvermicularis*

(e) *Trichinellaspiralis*

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

- a) Hookworms
- b) *Trichuristrichiura*
- c) *Strongyloidesstecoralis*
- d) *Trichinelaspirali*
- e) *Loa loa*

25 Which of the following is the dog tapeworm?

- (a) *Hymenolepis nana*
- (b) *Diphylobothrium. latum*
- (c) *Hymenoleptisdimunita*
- (d) *Enchinococcusgranulosus*

(e) *Taeniasolium*

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) *Trichuristrichiura*
- (d) *Enterobiusvermicularis*
- (e) *Schistosomamansoni*

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

- (a) *Hymenolepis nana*
- (b) *D. latum*
- (c) *Hymenoleptisdimunita*
- (d) *Enchinococcusgranulosus*
- (e) *Taeniasolium*

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)