



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL LABORATORY SCIENCES

AML2213 : HELMINTHOLOGY I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: 5 Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No Section(s). Attempt ALL questions.

Circle the correct answer in section A.

Section A

PAPER II

1. The infective stage of the Schistosoma worms is

- A. Cercaria
- B. Miracidia
- C. Egg
- D. Cysticercoid

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

- (a) *Ancylostoma duodenale*
- (b) *Trichuris trichiura*

(c) *Trichinella spiralis*

(d) *Strongyloides stercoralis*

3. 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*

4. 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*

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

A. *Strongyloides stercoralis*

B. *Shistosoma mansoni*

C. *Trichinella spiralis*

D. *Ascaris lumbricoides*

6. 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*

7. 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
8. The following is the first larval stage of trematodes
- A. Schistosomulum
 - B. Miracidia
 - C. Cercariae
 - D. Metacercariae
9. 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
10. The following nematode is not acquired through ingestion of infective eggs
- A. *Ascaris lumbricoides*
 - B. *Hookworm*
 - C. *Trichuris trichiura*
 - D. *Enterobius vermicularis*
11. The drug of choice in the treatment of *Ascaris lumbricoides* is
- A. Metronidazole
 - B. Abendanzole
 - C. Piperazine
 - D. Chloroquine
12. The drug of choice for treatment against *Schistosoma* adults is?
- A. Mebendazole

- B. Albendazole
- C. Arecoline hydrobromide
- D. Praziquantel

13. 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

14. 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*

15 The pathological changes in Schistosomiasis are mainly caused by:

- A. immature eggs.
- B. Mature eggs.
- C. Adult worm
- D. Adult worm

16 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*

17. The region of growth in Cestodes is the

- A. Scolex
- B. Neck
- C. Strobila

D. Proglotid

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

A. *Taenia solium*

B. *Diphylobothrium latum*

C. *Hymenolepis nana*

D. *Taenia saginata*

19 The following are hepatic flukes except?

A. *Faciola hepatica*

B. *Fasiola gigantica*

C. *Metagonimus yokogawi*

D. *Dicrocoelium dentriticum*

20. 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

21 The following worm belong to class Nematelminths:

A. *Hymenolepis nana*

B. *Dipylidium caninum*

C. *Echinococcus granulosus*

D. *Opistorchis felineus*

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

A. *Ascaris lumbricoides*

B. *Hookworm*

C. *Trichuris trichiura*

D. *Trichinella spiralis*

23 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 spirali*

24 Which of the following is the dog tapeworm?

- A. *Hymenolepis nana*
- B. *Diphyllobothrium. latum*
- C. *Hymenoleptis dimunita*
- D. *Enchinocucus granulosis*

25. 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

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

- A. *Ascaris lumbricoides*
- B. *Hookworm*
- C. *Trichuris trichiura*
- D. *Enterobius vermicularis*

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

- A. *Echinococcus granulosis*
- B. *Taenia saginata*
- C. *Diphyllobothrium latum*

D. *Dipylidium caninum*

28. Which one of the following is not a component of lugols iodine?
- A. Potassium iodide
 - B. Ethyl alcohol
 - C. Iodine crystals
 - D. Water
29. Eosinophils kills the parasite by the following
- A. Production of antibodies
 - B. Intracellular digestion
 - C. Extra cellular killing
 - D. Activation of mononuclear cells
30. Obstructive common bile duct is associated with
- A. *Schistosoma haematobium*
 - B. *Schistosoma japonicum*
 - C. *Schistosoma mansoni*
 - D. *Clonorchis sinensis*
31. Pipe-stem fibrosis of the liver in fascioliasis is due to what stage of the parasite?
- A. *Fasiola hepatica*
 - B. Juvenile
 - C. eggs
 - D. Cercaria
32. Adult worms of the following are found in blood tissue
- A. *Loa loa*
 - B. *Dracunculus medinensis*
 - C. *Wuchereria bancrofti*
 - D. *Brugia malayi*

33. 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*

34. 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*

35. The infective stage of the following parasite is found in crabs or crayfishes.

- A. *Fasciola hepatica*
- B. *Echinostoma ilocanum*
- C. *Clonorchis sinensis*
- D. *Paragonimus westermani*

36. Collection of blood specimen in the investigation of microfilaria depends on

- A. Time
- B. Locality
- C. Time and locality
- D. Species

37. What parasite has an egg that is plano-convex and is readily infective after discharge?

- A. *Toxocara canis*
- B. *Trichuris trichiura*
- C. *Ancylostoma duodenale*
- D. *Toxocara cati*

38. Which one of the following is diagnosed by tissue biopsy?

- A. *Trichinella spiralis*
- B. *Ascaris lumbricoides*
- C. *Strongyloides stercoralis*
- D. *Cryptosporidium parvum*

39. A host that harbors the asexual stage of a parasite is known

- A. Definitive host
- B. Intermediate host
- C. Reservoir host
- D. Facultative

40. Produces Ground itch to man.

- A. *Trichuris trichiura*
- B. *Necator americanus*
- C. *Enterobius vermicularis*
- D. *Ascaris lumbricoides*

Section B 60 Marks

Section B Answer all questions

1. Discuss the filariasis infection in man (20 marks)
2. a). Classify *Loa loa* parasite (10 marks)
b). Describe the effect of *Necator americanus* on humans? (10 marks)
3. a). Outline the pathogenesis of *Trichuris trichiura*? (10 marks)
b) Describe in the cultural method of Nematodes in aid of diagnosis? (10 marks)