



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF MEDICAL SCIENCES
UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL LABORATORY SCIENCES

AML 2213 : MEDICAL HELMINTHOLOGY I

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 2 HOURS

DATE: 13 Aug 2019

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. The following nematodes are acquired through ingestion of infective eggs except

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

2. Each of the following statements concerning hookworm infection is 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*

3. The drug of choice in the treatment of *Ascaris lumbricoides*

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

4. Which one of the following parasites that cause rectal prolapse

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

5. Each of the following statements concerning *Ascaris lumbricoides* is 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

6. What is the method of choice for demonstrating a 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

7. 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*

8 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*

9. Which one of the following is not soil transmitted helminth?

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

10. The following worms belong to class Nematelminths:-----

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

11. Bothriocephalus anemia is associated with-----

- a). microcytic hypochromic cells
- b). Folate deficiency
- c). iron deficiency anemia
- d). pernicious anemia

12. Mode of transmission for Wuchereria is-----

- a. Blackfly bite
- b. Deer fly bite
- c. Flees
- d. Mosquito bite

13. 'Dracunculus' is causative agent for -----

- a. Pinworm
- b. Hookworm
- c. Guinea worm
- d. Anisakiasis

14. This condition results from the accidental ingestion of helminth eggs. In this instance the human becomes the intermediate rather than the definitive host. The correct answer is-----

- a. Trichinosis
- b. Cysticercosis.
- c. Ascariasis.
- d. Strongyloidiasis

15. Respiration and Circulation are carried out by what process in Platyhelminthes and Nematoda?

- A) Diffusion
- b) Phagocytosis

- c) Organ systems
- d) Pinocytosis

16. What key characteristic(s) of the microfilaria 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

17. Eosinophil's kills the parasite by the following-----

- a). Production of antibodies
- b). Intracellular digestion
- c). Extra cellular killing
- d). Activation of mononuclear cells

18. Obstructive uropathy is associated with-----

- a). *Schistosoma haematobium*
- b). *Schistosoma japonicum*
- c). *Schistosoma mansoni*
- d). *Schistosoma mekongi*

19. Whipworm' is caused by-----

- a. Ascaris
- b. Trichuris
- c. Hookworm
- d. Trichinosis

20. Trichinilla spiralis is considered-----

- a) Monoxeous parasite
- b) Heteroxenous
- c) Auto heteroxenous

d) None of the above.

21. Pinworm' is caused by

- a. Enterobius
- b. Ascaris
- c. Trichinella
- d. Anisakis

22 Worldwide, the most prevalent helminth to infect human is:

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

23. There are four bands of muscles in Nematodes, two are dorso-lateral and two-----

- A. ventro-lateral
- B. dorso-ventral
- C. dorso-lateral
- D. latero-ventral

24. Nematode means

- A. pointed ends
- B. pointed bodies
- C. pointed cells
- D. peaked heads

25. Digestive system of nematodes have two openings and in form of

- A. alimentary canal
- B. digestive tract
- C. neuron
- D. muscles

26. Which stage of helminth infection is usually infective for humans?

- a). First
- b). Second
- c). Third

d). Fourth

27. Which one of the following is diagnosed by concentration methods?

- a). *Trichinella spiralis*
- b). *Ascaris lumbricoides*
- c). *Strongyloides stercoralis*
- d). *Cryptosporidium parvum*

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

- a). Definitive host
- b). Intermediate host
- c). Reservoir host
- d). Facultative

29. Nematodes lack respiratory system and

- a. digestive system
- b. nervous system
- c. circulatory system
- d. excretory system

30. Which of the following has an-incorrect match between organism and the appropriate diagnostic procedure ?

- a. *Onchocerca volvulus* - examination of skin snips
- b. *Cryptosporidium* - modified acid fast stain
- c. *Echinococcus granulosus* - routine ova and parasite examination
- d. *Schistosoma haematobium* -- examination of urine sediment

31. The single most important practice to reduce hospital associated infections is:

- a. Hand washing
- b. Isolation of infectious disease patients.
- c. Reverse flow hospital rooms
- d. Face masks

32. Which of the listed parasites is not an endoparasite:

- a. Lungworm

- b Tapeworm
- c. Demodex mites
- d. Roundworm

33. Dogs are the source of human infection by each of the following parasites except:

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

34. Respiration and Circulation are carried out by what process in Platyhelminthes and Nematoda?

- a. Diffusion
- b. Phagocytosis
- c. Pinocytosis
- d. Organ systems

35. Soil-transmitted helminths prefer which of the following types of soil?

- a. Clay
- b. Sandy
- c. Vegetative
- d. Rocky

36. In an individual infected with ascaris, the larvae can be found in the:

- a. Liver
- b. Lungs
- c. Intestines
- d. All of the above

37. *Strongyloides stercoralis* can cause:

- a. Diarrhea
- b. Pulmonary hemorrhage
- c. Pneumonia
- d. All of the above

38. All of the following are symptoms of Dracunculiasis infection except:

- a) Tetanus
- b) Abscess
- c) Painful edema
- d) Facial redness

39. Which of the following does not accurately describe Lymphatic filariasis?

- a) It mainly affects the lower
- b) Chyluria is the most common manifestation
- c) The intermediate vector is the mollusc
- d) It is caused by the parasitic worms *Wuchereria bancrofti* and *Brugia malayi*

40. Which of the following statements about soil-transmitted helminthiases is false?

- a) Mebendazole and albendazole are used for large-scale prevention of morbidity in children living in endemic areas
- b) Symptoms include diarrhea, abdominal pain, general malaise and weakness
- c) *Ancylostoma duodenale* infects 1.2 billion
- d) Hookworms can cause intestinal blood loss

Section B Answer all the questions 60 marks

- 41a). Describe general characteristic of Nematodes (10 marks)
- b). Describe the clinical manifestations of filariasis (15 marks)
42. a). State the prevention and control of *Ascaris lumbricoides hepatica* infection (10 marks)
- b) Describe the source and mode of parasitic infection or infestation (15 marks)
43. Describe in detail the direct wet technique in the epidemiology helminthes (10 marks)