



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

DIPLOMA IN MEDICAL LABORATORY SCIENCES
(DMLS)

AML 2230 : HELMINTHOLOGY I

SPECIAL/SUPPLEMENTARY : EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **TWO** sections.

Answer all questions in **Section A** and **B**. ½ marks deducted for any wrong answer in **Section A**.

This paper consists of 9 PRINTED pages

SECTION A MCQ (40MARKS)

1. The following parasites life cycle takes heart, lung migration except:
 - a) Enterobins vermicularis
 - b) Ancylostoma duodenale
 - c) Necata americanus
 - d) Ascaris lumbricoides
 - e) LoaLoa

2. The transmission difference between gutnematodes and tissue nematodes is:-
 - a) Gut nematodes are transmitted by a vector
 - b) Tissue nematodes are faecal orally transmitted
 - c) Tissue nematodes require a vector for transmission
 - d) Gut nematodes must have a reservoir host
 - e) Tissue nemades must have at list intermediate hosts

3. The microfilaria which is unsheathed, the tail ends bluntly and contain nuclei to the tip of the tail is:-
 - a) Mansonella Ozzardi
 - b) Wuchereria bancrofti
 - c) Brugia Malayi
 - d) Brugia timori
 - e) Dipetelonema streptocerea

4. The following microfilaria of filarial worm are unsheated except
 - a) Mansonella ozzards
 - b) Dipetelonema perstans

- c) *Onchocerca volvulus*
 - d) *Loa loa*
 - e) *Dipetalonema streptocerca*
5. Microfilariae which are sheathed and the posterior end free of nuclei include:-
- a) *Wuchereria bancrofti*
 - b) *Brugia malayi*
 - c) *Onchocerca volvulus*
 - d) *Loa Loa*
 - e) *Mansonella ozzardi*
6. The adult stages of *Trichinella spiralis* are found in :-
- a) Striated muscles of pigs
 - b) Striated muscles of truma
 - c) The gut of the host animals
 - d) The blood stream of animals
 - e) The lymphatic system
7. The following nematodes are diagnosed by scotch tape technique
- a) *Strongyloides stercoralis*
 - b) *Enterobius vermicularis*
 - c) *Ancylostoma duodenale*
 - d) *Trichuris trichiura*
 - e) *Ascaris lumbricoides*
8. The largest nematode parasite is
- a) *Strongyloides stercoralis*

- b) *Enterobius vermicularis*
 - c) *Ancylostom duegenale*
 - d) *Nectator americanus*
 - e) *Ascaris lumbricoides*
9. Cutaneous larvae migrans is the name given to migrating larvae of:-
- a) *Ancylostoma braziliense*
 - b) *Enterobius vermicularis*
 - c) *Wuchereria bancrofti*
 - d) *Trichuris trichiura*
 - e) *Ascaris lumbricoides*
10. The nematode referred to whip worm is:-
- a) *Enterobius vermicularis*
 - b) *Trichuris trichiura*
 - c) *Trichostrongylus axei*
 - d) *Strongyloides stercoralis*
11. Seat worm infection refers to one of the following nematodes
- a) *Trichuris trichiura*
 - b) *Trichostrongylus axei*
 - c) *Ascaris lumbricoides*
 - d) *Enterobius vermicularis*
 - e) *Nectator americanus*
12. The ova of hookworm species is

- a) Thick shelled and colourless
- b) Double thick shelled and colourless
- c) Thin shelled and colourless
- d) Double thin shelled and Barvel shaped
- e) Thin shelled and pear shaped

13. Drawcunculus medinerisis (gunea worm) that cuases a disease called drancuculiasis/ dracunculosis is transmitted by:

- a) Culicoides
- b) Turbaniol flies
- c) Simulium
- d) Balck flies
- e) Copepodes

14. Lymphatic filarasis is caused by tissue nemade including:-

- a) Loa Loa
- b) Onchocerca volvulus
- c) Wucheveria bancroffi
- d) Dipetelonema perstans
- e) Mansonella ozzardi

15. The adult stages of enterobius vermicularis are found:-

- a) Large intestine
- b) Small intestine
- c) Mesentries
- d) Lungs

e) Villii

16. Hookworm infection is prevented and controlled by:

- a) Proper cooking of meals
- b) Washing hands after eating meals
- c) Spraying insecticides
- d) Wearing of shoes
- e) Clearing of bushes

17. Cutaneous larva migrans is the name to migrating of:-

- a) *Trichuris trichiura*
- b) *Ancylostoma braziliense*
- c) *Ascaris lumbricoides*
- d) *Wuchereria bancrofti*
- e) *Onchocerca volvulus*

18. Visceral larva migrans is caused by

- a) *Ascaris lumbricoides*
- b) *Ancylostoma braziliense*
- c) *Enterobius vermicularis*
- d) *Strongyloides stercoralis*
- e) *Toxocara canis*

19. The following nematode is transmitted through ingestion of the eggs:-

- a) *Enterobius vermicularis*
- b) *Strongyloides stercoralis*

- c) Strongylus species
- d) Hookworm species
- e) Trichuris trichiura

20. Which of the following nematode parasites is in the order oxyurida?

- a) Strongyloides stercoralis
- b) Ancylostoma duodenale
- c) Enterobius vermicularis
- d) Dictyophyma renale
- e) Trichostrongylus orientalis

21. Which of the following nematode parasites is/are belong to the order anoptrilida

- a) Strongyloides stercoralis
- b) Ancylostoma duodenale
- c) Enterobius vermicularis
- d) Dictyophyma renale
- e) Trichostrongylus orientalis

22. Which of the following statements are true for the tissue nematodes and intestinal nematode transmission:-

- a) Tissue nematodes depend on animals as reservoir host
- b) Most tissue nematodes are transmitted by insect vector and intestinal are soil transmitted
- c) Most of intestinal nematodes are transmitted by insect vector and tissue nematodes are soil transmitted
- d) Intestinal nematodes and tissue require fresh water for transmission
- e) The intestinal nematodes need dirty environment while tissue nematodes requires clean environment for transmission

23. Which of the following parasites has eggs with albuminous mammillation layer?

- a) *Trichuris trichiura*
- b) *Enterobius vermicularis*
- c) *Ascaris lumbricoides*
- d) *Necator americanus*
- e) *Oesophagostomum opisthomum*

24. Wire worm infection is referred to one to the following parasites

- a) *Trichostongylus orientalis*
- b) *Angiostrongylus cantonensis*
- c) *Enterobius vermicularis*
- d) *Trichuris trichiura*
- e) *Necator americanus*

25. The nematode which have eggs characterized by protruding bipolar plugs is:-

- a) *Enterobius vermicularis*
- b) Hook worm species
- c) *Capilaria hepatica*
- d) *Ascaris lumbricoides*
- e) *Trichuria trichiura*

26. The nematod parasite that causes false Hookworm infection

- a) *Sygamus laryngeus*
- b) *Angiostrongylus contonensis*
- c) *Trichostrongylus orientalis*
- d) *Trichuris trichiura*
- e) *Ternidens deminuta*

27. Which one of the characteristics is not true for the class nematode:-

- a) They are unsegmented
- b) Posses mouth, oesophagus and anus
- c) Sexes are generally separate
- d) Reproduction is oviparous and carviparous
- e) Generally they are hermaphroditic

28. The microfilaria of the following parasites are found in blood circulation except:

- a) *Dipletalonema perstans*
- b) *Dipetelonema streptocerca*
- c) *Mansonella ozzardi*
- d) *Wuchereria Bancrofti*
- e) *LoaLoa*

29. Grinding of teeth, nervousness, discomfort due to itching are the signs and symptom of

- a) *Ascaris lumbricodes*
- b) *Enterobius vermicularis*
- c) *Trichurus trichiura*
- d) *Strongyloides stercoralis*

e) *Ancylostoma duodenale*

30. Which of the following parasites, the adult male dies almost immediately and copulation?

- a) *Ascaris lumbricoides*
- b) *Trichuria trichura*
- c) *Brugia Malayi*
- d) *Enterobius varmicularis*
- e) *Strongyloides stercoralis*

31. The microfilaria which have the characteristics features of being sheathed, have two distinct nuclei at posterior and of the tail is:

- a) *Brugia malayi*
- b) *Wuchereria bancrofti*
- c) *Onchocerca volvulus*
- d) *Loa Loa*
- e) *Mansonella Ozzardi*

32. "Larvae currens" and urticarial wheels mainly on trunk is caused by migration of larvae of:-

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

33. Which of the following nematode parasite produce eggs which are discharged in ocean water hatch to larvae and ingested by crustaceans:-

- a) Aesophogostomunapistomua
- b) Anisaki simplex
- c) Angiostrongylus species
- d) Toxocara cani
- e) Toxascaris leonina

34. Diurnal periodicity is shown by microfilarice (larvae) of:-

- a) Wuchereria bancrofti
- b) Brugia malayi
- c) Brugia timori
- d) Drancunculus medimensis
- e) Loa Loa

35. Which of the following microfilaria is unsheathed except

- a) Wuchereria bacrofti
- b) Brugia Malayi
- c) Onchocerca volvulus
- d) Brugai timori
- e) Loa Loa

36. Which of the following is the principal definitive host of Dicrofilaria amities :-

- a) Dog
- b) Cow
- c) Man
- d) Donkey
- e) Fish

37. River blindness is the given to disease caused by

- a) Loa Loa
- b) Onchocerca volvulus
- c) Wuchereria bancrofti
- d) Onchocerca vulvolus
- e) Brugia malayi

38. Zoonosis is :-

- a) Parasitic infections primarily confined to animals only
- b) Parasitic infections confined to human only
- c) Produce disease in man
- d) Disease either of human or animal
- e) Disease of vectors only

39. Facultative parasites are:-

- a) Organisms that can not exist without a host
- b) Organisms that live on un usual host
- c) Organisms that under favorable conditions may live either parasitic or non parasitic
- d) Organism that live within the body of the host
- e) Organism that attach a host and develop no further

40. Auto-infection is associated with the following nematode

- a) Ascaris lubricoides
- b) Trichures trichura
- c) Dipetelonemastreptocera
- d) Trichinella spiralis

e) *Strongyloides stercoralis*

SECTION B ESSAY (60marks)

1. (a) List FIVE factors which govern endemiaty of soil transmitted helminthes **(10marks)**

(b) Outline FIVE preventive and control measures against enterobius vermicularis **(5marks)**

(c) List FIVE clinical manifestation and pathology of onchocerciasis (*onchocerca volvulus*)

(5marks)

2. (a) Discuss the life cycle of *Drancuncules medinensis* (Guinea worm) **(10marks)**

(b) List TWO symptoms and pathology of loa loa infection **(5marks)**

(c) List TWO prevention and control of ochocerca volvuslus infection **(5marks)**

3. (a) Tabulate FIVE differential features of *necator amercicanus* and *ancylostoma duodenale*

(10marks)

(b) Outline TWO diagnostic procedures that can be used to demonstrate the infection of
strongyloides stercoralis

(5marks)

- (c) Briefly list TWO diagnostic procedures that can be instituted against *Enterobius vermicularis*

(5marks)