



TECHNICAL UNIVERISTRY OF MOMBASA

# Faculty of Applied & Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR DIPLOMA IN:  
MEDICAL LABORATORY SCIENCES (DMLS 13J 14J & MID ENTRY)

AML 2302: HELMINTHOLOGY II

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: JUNE 2015**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consists of 2 sections i.e. **A** and **B**. Section **A** comprises of **40** multiple choice questions and section **B** consist of **THREE** essay questions each **20** marks

This paper consist of **SEVEN** printed pages

## SECTION A

1. Which of the following is not hepatic trematodoex?
  - A. Fasciola hepatica
  - B. Clonorchis sinensis
  - C. Fasciolopsis buski
  - D. Opistorctis felineus
  - E. Opistorchis viverin
  
2. Crabs may transmit
  - A. Diphyllobotrium latum
  - B. Clonorctris sinensis
  - C. Paragoninius westermeni
  - D. Hymenolepis nena
  
3. Undercooked fish may act as source of infection of:
  - A. Taenia saginata
  - B. Ectiococcus granulosis
  - C. Teenia solium
  - D. Clonorctis sinensis
  - E. Hymenolepis diminuta
  
4. Operculated eggs are not seen in the following except of:
  - A. Hymenolepis nena
  - B. Taenia solium
  - C. Schistosoma haematobium
  - D. Ectrinococcus granulosis
  - E. Heterophyes heterophes
  
5. Procercooid larvae refers to:
  - A. Taenic saginata
  - B. Hymenolepis nana
  - C. Dipylidium caninum
  - D. Diphyllobothrium letum
  - E. Dicrocoelium dentriticum
  
6. Coenurus cerebralis is clarval stage of:-
  - A. Multiceps multiceps
  - B. Dipylidium caninum
  - C. Hymenolepis nana
  - D. Ectrinococcus granulosis
  - E. Daragonimus westermeni
  
7. The eggs are passed in sputum refers to:
  - A. Fasciola trepatica
  - B. Clonorchis sinensis
  - C. Diphyllobothrium latum
  - D. Paragonimus westermeni
  - E. Fasiola giganticum

8. Sparganosis is a term used to describe infection by plevocercoides larvae of:
- A. Taenia saginata
  - B. Dipylidium caninum
  - C. Hymenolepis nana
  - D. Diphylobothrium latum
  - E. Diphylobothrium of the genus spiroetrua
9. Sheep liver fluke is the common name of:
- A. Fasciola hepatica
  - B. Fasciola gigantica
  - C. Clonorchis sinensis
  - D. Fasciolopsis buski
  - E. Dicrocoelium dentriticum
10. The genital pore of Taenia solium is located at:
- A. The anterior end of the proglottid
  - B. The posterior end of the proglottid
  - C. The ventral side of the proglottid
  - D. The dorsal ventral of proglottid
  - E. The lateral margin of the proglottid
11. Dwarf tapeworm is the common name of:
- A. Echinococcus granulosus
  - B. Hymenolepis nana
  - C. Multiceps multiceps
  - D. Dipylidium caninum
12. Which of the following fluke (s) have diagnostic characteristics of color of large spine surrounding the oral sucker?
- A. Gastrodiscoides hominis
  - B. Dicrocoelium dentriticum
  - C. Ectinostoma ilocanum
  - D. Fasciolopsis buski
  - E. Heterophyes heterophyes
13. The intermediate host of Dipylidium caninum is:-
- A. Dog
  - B. Chryllops
  - C. Fish
  - D. Snail
  - E. Fleas
14. The common name "little liver fluke"
- A. Dicrocoelium dentriticum
  - B. Fasciola gigantica
  - C. Clonorchis sinensis
  - D. Heterophyes heterophyes
  - E. Fasciolopsis buski

15. The infetive larval stage of pseudophyllidea is:-  
A. Cysticercus  
B. Cercavia  
C. Metacarcaria  
D. Plerocerioid  
E. Coenurus
16. The largest intestinal trematude is:-  
A. Dicrocodium dentriticum  
B. Fasciola giganticum  
C. Fasciolopsis buski  
D. Schistosoma mansoni  
E. Clonorctris sinensis
17. The cestode that causes trydatial disease is:  
A. Muticeps multiceps  
B. Taenia solium  
C. Echinococcus granulosus  
D. Hymenolepis nana
18. Which of the following parasite sexes are separate:  
A. Taenia solium  
B. Schistosoma mansoni  
C. Clonorchis sinensis  
D. Heterophes heterophes  
E. Paragonimus westermani
19. The egg shell sticky causing debris to adhere to the surface making the characteristics spine difficult to be recognized is:-  
A. Schistosoma mansoni  
B. Schistosoma boris  
C. Schistosoma intercalatum  
D. Schistosoma haematobium  
E. Schistosoma japonicum
20. Hermaphroditic adult worms found in pairs in case of:  
A. Schistosoma haematobium  
B. Heterophes heterophyes  
C. Diphllobothrium latum  
D. Paragonimus westermani  
E. Dicrocodium dentriticum
21. Gynacophoric canal is not seen in worm of:  
A. Schistosoma intercalatum  
B. Schitosome mansoni  
C. Schistoma boris  
D. Ectinostoma ilocanum  
E. Schistosoma japonicum

22. The rat tape worm refers to:
- A. Dipylidium caninum
  - B. Hymenolepis
  - C. Echinococcus granulosus
  - D. Hymenolepis nana
  - E. Taenia saginata
23. The vestelum of cestodes is located at:
- A. Anterior end of the proglottid
  - B. Posterior end of the proglottid
  - C. Posterior end of the strobila
  - D. Anterior end of the scolex
  - E. Posterior end of the scolex
24. Cercaria is the infective larval stage of:
- A. Schistosomes
  - B. Fasciola
  - C. Fasciolopsis
  - D. Paragonimus
  - E. Clonorchis
25. All of the following parasites do not reside in lungs except of:
- A. Heterophyes heterophyes
  - B. Paragonimus westermani
  - C. Clonorchis sinensis
  - D. Fasciolopsis buski
  - E. Watsonius watsoni
26. The intermediate host for Taenia solium is:
- A. Cattle
  - B. Sheep
  - C. Snails
  - D. Pigs
  - E. Fox
27. In case of infection with schistosomes eggs passed into fresh water hatch to:
- A. Schistosomules
  - B. Cercariae
  - C. Metacercarial
  - D. Miracidium
  - E. Mother sporocyst
28. Which of the following parasites is transmitted by dogs?
- A. Hymenolepis diminuta
  - B. Taenia solium
  - C. Dipylidium caninum
  - D. Echinococcus granulosus
  - E. Hymenolepis nana

29. Fleas are intermediate host of:
- A. *Hymenolepis nana*
  - B. *Echinococcus granulosus*
  - C. *Dipylidium caninum*
  - D. *Multiceps multiceps*
  - E. *Taenia solium*
30. Crustaceans are the second intermediate hosts of:
- A. *Heterophyes heterophyes*
  - B. *Paragonimus westermani*
  - C. *Clonorchis sinensis*
  - D. *Metagonimus yokogawai*
  - E. *Dicrocoelium electrificum*
31. Metacercariae are the infective stage of:-
- A. *Taenia solium*
  - B. *Hymenolepis diminuta*
  - C. *Diphyllobothrium latum*
  - D. *Dipylidium caninum*
  - E. *Fasciola hepatica*
32. The following is true for cysticercosis infection:
- A. Transmission by ingestion of eggs of *taenia saginata*
  - B. Transmission by ingestion of fish containing cysticercus
  - C. Transmission by ingestion of raw or undercooked pork
  - D. Transmission by ingestion of raw or undercooked beef
  - E. Transmission by ingestion of eggs of *taenia solium*
33. The following parasites belong to order Cyclophyllida except:
- A. *Heterophyes heterophyes*
  - B. *Hymenolepis nana*
  - C. *Taenia saginata*
  - D. *Echinococcus granulosus*
  - E. *Multiceps multiceps*
34. The intermediate host of *Diphyllobothrium latum* is:-
- A. Fish
  - B. Copepods
  - C. Ants
  - D. Snails
  - E. Fleas
35. The laboratory diagnosis of *Taenia* species is by:
- A. Defection of eggs in urine
  - B. Defection of cysticerci in stool
  - C. Defection of eggs in stool
  - D. Detection of scolex in stool
  - E. Detection of adult worms in stool

36. The following are not preventive and control measures against *Diphyllobothrium latum* except of:-
- Avoid eating raw or undercooked pork
  - Control of snail intermediate hosts
  - Avoid eating dirty fruits and vegetation
  - Control of copepod intermediate hosts
  - Avoid eating raw or under cooked beef
37. The body of cestodes is referred to as:-
- Scolex
  - Proglottid
  - Rostellum
  - Segment
  - Strobila
38. Corconia is a structure found in:
- Procercooids
  - Plerocercoids
  - Cysticercoids
  - Hydatial cyst
  - Coenurus
39. Carcinoma of urinary bladder is associated with:-
- Schistosoma matheei*
  - Schistosoma intercalutum*
  - Schistosoma Japonicum*
  - Schistosoma mansoni*
  - Schistosoma haematobium*
40. The larval stage of *multiceps multiceps* is:-
- Plevocercoid
  - Cysticercoid
  - Coenurus
  - Hydatid
  - Procercooid

## SECTION B – ANSWER ALL QUESTIONS

### Question One

- Discuss the life cycle of *Diphyllobothrium latum* (8 marks)
- Outline FIVE general characteristics of Trematodes (5 marks)
- Mention FIVE morphological features of *schistosoma haematobium* (5 marks)
- Define the term cercarial dermatitis (swimmersitch) (2 marks)

### Question Two

- Describe the life cycle of *Fasciola hepatica* (10 marks)

- b) Mention FIVE facts which could compare and contrast the characteristics of pseudophyllidea and cyclophyllidea (5 marks)
- c) State FIVE signs/symptoms and pathogenesis of Taenia solium (5 marks)

**Question Three**

- a) Mention in detail SIX general preventive and control of Taenia species infection (6 marks)
- b) Write FOUR morphological characteristics of Echnococcus granulosus (4 marks)
- c) Explain THREE possible ways which humans infected by the disease referred to as “sparganosis” (6 marks)
- d) Write FOUR favourable conditions for continuation of life cycle of Diphyllbothrium latum (4 marks)