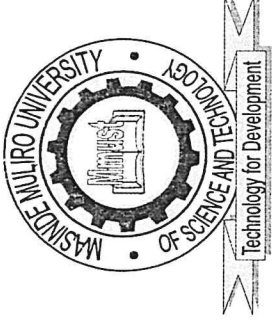


110



(University of Choice)
**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

FIRST YEAR, SECOND TRIMESTER EXAMINATION

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN CLINICAL MEDICINE**

COURSE CODE: HCM 134

COURSE TITLE: MEDICAL PARASITOLOGY AND ENTOMOLOGY

DATE: FRIDAY 22ND APRIL 2022

TIME: 8:00-11:00 AM

INSTRUCTIONS TO CANDIDATES

ANSWER ALL QUESTIONS

Section A: Multiple choice questions

Section B: Short Answer Questions

Section C: Long Answer Questions

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over. ▶

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)

- Each of the following statements concerning hydatid cyst disease is correct EXCEPT:
 - The disease occurs primarily in tropical Africa.
 - The disease is caused by a parasite whose adult form lives in dogs' intestines.
 - The disease is caused by *Echinococcus granulosus*.
 - The cysts occur primarily in the liver.
- A 13-year-old boy from Kakamega was brought to the emergency room with a prolapsed rectum. Examination of the rectum reveals small worms that resemble whips attached to the mucosa. A stool sample reveals eggs that are barrel shaped, with bipolar plugs. Which of the following is the most likely cause?
 - Entamoeba histolytica*
 - Ascaris lumbricoides*
 - Trichuris trichiura*
 - Enterobius vermicularis*
- Larval stage of *Taenia solium* is called
 - hydatid cyst
 - cysticercoid
 - cysticercus bovis
 - cysticercus cellulosae
- This is a specific characteristic for human trematodes:
 - Schistosoma japonicum* has ova with a lateral spine
 - Miracidium is an infective stage to human
 - All trematode eggs are operculated
 - Snail is the first intermediate host
- The main anatomic location of *Schistosoma mansoni* adult worms is:
 - Renal tubules
 - Lung alveoli
 - Bone marrow
 - Intestinal venules
- Each of the following parasites passes through the lung during human infection EXCEPT:
 - Strongyloides stercoralis*
 - Ascaris lumbricoides*
 - Wuchereria bancrofti*
 - Necator americanus*
- Myocarditis and heart failure can occur in a patient infected with
 - Strongyloides stercoralis*
 - Necator americanus*
 - Trichinella spiralis*
 - Enterobius vermicularis*
- Anal pruritis is a manifestation of infection with
 - Trichuris Trichiura*

- B. *Trichinella spiralis*
- C. *Enterobius vermicularis*
- D. *Entamoeba histolytica*

8. Which of the following helminth enters the body of a man through the skin of his feet if he walks barefoot in the contaminated soil?
- A. *Ascaris*
 - B. *Ancylostoma*
 - C. *Schistosoma*
 - D. *Wuchereria*
9. Which of the following vectors is responsible for transmitting the parasite causing filariasis?
- A. *Anopheles mosquito*
 - B. *Aedes mosquito*
 - C. *Tse Tse fly*
 - D. *Culex mosquito*
10. Roundworm infection produces _____
- A. Vague symptoms of nausea and cough
 - B. Clear Symptoms of abdominal pain and obstruction
 - C. Internal Bleeding, Pneumonia and Peritonitis in all cases
 - D. Eosinophilia never occurs
11. Where do the sexual stages of *Plasmodium* develop in its life cycle?
- A. Gut of mosquito
 - B. Brain of human
 - C. Red Blood Corpuscles of human
 - D. Liver of human
12. Produces massive diarrhea in patient with low resistance.
- A. *Cryptosporidium parvum*
 - B. *Toxoplasma gondii*
 - C. *Pneumocystis carinii*
 - D. A & C
13. This protozoa causes dysentery:
- A. *Giardia lamblia*
 - B. *Cystoisospora belli*
 - C. *Entamoeba histolytica*
 - D. *Blastocystis hominis*
14. Regarding Chagas' disease:
- A. It is caused by *Trypanosoma brucei* complex
 - B. Human acquires the disease via the bites of infected sandflies
 - C. It causes megasyndrome in patients with prolonged illness
 - D. The most common clinical manifestation is Winterbottom's sign
15. Regarding *Schistosoma* spp.:
- A. The diagnostic stage is the egg
 - B. The infective stage to human is miracidium
 - C. Albendazole is the drug of choice for the treatment of its infection
 - D. Its infection can be prevented by eating cooked meat

16. This parasite can cause abscess formation in the liver:

- A. *Giardia intestinalis*
- B. *Cystoisospora belli*
- C. *Entamoeba histolytica*
- D. *Hymenolepis nana*

17. A 24-year-old woman at 32 weeks gestation was confirmed through ultrasound that her foetus had hydrocephaly. This clinical manifestation is thought to be due to an infection acquired during her current pregnancy. The organism which causes this congenital anomaly is

- A. *Trypanosoma cruzi*
- B. *Plasmodium vivax*
- C. *Toxoplasma gondii*
- D. *Trypanosoma brucei*

18. _____ is a vector for *Leishmania donovani*

- A. *Lutzomyia spp*
- B. *Panstrongylus spp*
- C. *Phlebotomous spp*
- D. *Glossina spp*

19. Mosquitoes is/are the vector in the following disorder(s)

- A. Bancroftian filariasis
- B. Onchocerciasis
- C. Visceral leishmaniasis
- D. African trypanosomiasis

20. _____ has stercorarian development of parasites in it

- A. *Glossina*
- B. *Panstrongylus*
- C. *Lutzomyia*
- D. *Musca*

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS)

1. Describe the life cycle of *Plasmodium* within the human host (8 marks)
2. Describe control practices for soil transmitted helminthes (8 marks)
3. Using appropriate illustrations describe the morphological forms of haemoflagellates (8 Marks)
4. Give an account of the prevention strategies for arthropod borne parasitic diseases (8 marks)
5. Describe the pathogenesis of *Entamoeba histolytica* (8 marks)

SECTIONS C: LONG ANSWER QUESTIONS (40 MARKS)

1. There is a breakout of diarrheal infection in one of the sub counties of kakamega. It is suspected that this could be due to a parasitic infection. You have been tasked to carry out an investigation to establish the causative agent. Describe the procedures you would use to carry out the diagnosis to identify the causative agent (20 marks)
2. Discuss mechanisms by which parasites escape the host immune system citing relevant examples (20 marks)