



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE
OF BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES
FIRST SEMESTER, 2016/2017
(JANUARY - APRIL, 2017)

STREAM: Y2 S1 **MELS 265; MEDICAL PARASITOLOGY** **TIME: 3 HOURS**
DAY: THURSDAY, 9.00 - 12.00 PM **DATE: 11/05/2017**

INSTRUCTIONS

1. *Do not write anything on this question paper.*

SECTION A: COMPULSARY (20MKS)

- 1- *Entamoeba histolytica* trophozoites encyst in which of the following parts?
 - a. the wall of lower part of small intestine
 - b. the wall of the recto-sigmoid colon
 - c. the lumen of the colon
 - d. none of the above

- 2- *Naegleria fowleri* infection is diagnosed by:
 - a. Blood film
 - b. Serological examination
 - c. Lumber puncture
 - d. None of the above

- 3- *Acanthamoeba* species causes.....
 - a. chronic primary meningoencephalitis
 - b. keratitis with blindness
 - c. granuloma of internal organs
 - d. all of the above
 - e. none of the above

- 4- Each of the following parasite is transmitted by mosquitoes except:
 - a. *Leishmania donovani*
 - b. *Wuchereria bancrofti*
 - c. *Plasmodium vivax*
 - d. *Plasmodium falciparum* -

- 5- Which of the following statements is true about *trichomonas vaginalis* infection?
 - a. is caused by protozoan parasite

- b. the infective stage is the trophozoite
- c. may infect males
- d. all of the above

- 6- Which of the following statements are correct regarding giardiasis :
- a. transmitted by ingestion of cyst
 - b. affects mainly the upper small intestine
 - c. diagnosed by examination of stool or duodenal contents
 - d. all are correct

- 7- Laboratory diagnosis of scabies is best done by?
- a. Fecal examination
 - b. Serology
 - c. Blood examination
 - d. Skin scraping

- 8- Skin myiasis is due to invasion of skin by?
- a. *Sarcoptes scabiei*
 - b. trematode cercariae
 - c. lice
 - d. fly larvae

- 9- Which of the following is NOT a cause of splenomegaly?
- a. schistosomiasis
 - b. malaria
 - c. ascariasis
 - d. Kala-azar

- 10-Each of the following statements concerning hookworm infection is correct except:
- a. Hookworm infection can cause pneumonia
 - b. Hookworm infection is acquired by humans when filariform larvae penetrate the skin
 - c. Hookworm infection is caused by *Necator americanus*
 - d. Hookworm infection can be diagnosed by finding the trophozoite in the stool

- 11-Each of the following statements concerning *Trichomonas vaginalis* is correct except:
- a. *T. vaginalis* is transmitted sexually
 - b. *T. vaginalis* can be diagnosed by visualizing the trophozoite
 - c. *T. vaginalis* can be treated effectively with metronidazole
 - d. *T. vaginalis* causes bloody diarrhea

- 12-Pigs or dogs are the source of human infection by each of the following parasites except:
- a. *Echinococcus granulosus*
 - b. *Taenia solium*
 - c. *Ascaris lumbricoides*
 - d. *Trichinella spiralis*

- 13-In malaria, the form of plasmodia that is transmitted from mosquito to human is the
- a. Sporozoite
 - b. Gametocyte

- e. Merozoite
- d. Hypnozoite

14- *Cryptosporidium* multiplies in which of the following parts?

- a. the lumen of small intestine
- b. the brush border of epithelial lining of small intestine
- c. the lumen of large intestine
- d. non of the above

15- A 65 years old man showed symptoms associated with Enterobiasis, what specimen would you recommend to confirm this in the laboratory?

- a. Stool
- b. Urine
- c. Blood
- d. None of the above

16- Which of the following parasites are not likely to be seen in a blood sample?

- a. *Plasmodium vivax*
- b. *Wuchereria bancrofti*
- c. *Loa loa*
- d. *Echinococcus granulosus*

17- Which of the following diseases is NOT transmitted by arthropod vector:

- a. Malaria
- b. Schistosomiasis
- c. Yellow Fever

d. Onchocerciasis

18- Which of the following parasites is responsible for Flask shaped ulcers in the colon?

- a. *Giardia lamblia*
- b. *Acanthamoeba*
- c. *Entamoeba histolytica*

d. A and C

19- Which of the following terms best describes a parasite that goes through the host digestive system without causing harm?

- a. Permissive
- b. Non-permissive
- c. Paratenic
- d. Cyclic

20. Which of the following is not an important factor in parasite geographical distribution?

- a. Ease of escape from the body

- b. Presence of a host
- c. Host habits
- d. Parasite age

SECTION B [20 MARKS]

(Answer all the questions in this section)

- 21) Classify parasitic protozoans based on their location within the host body. [4 marks]
- 22) Describe the morphology of *G. lamblia* trophozoite. [3 marks]
- 23) Outline major morphological differences between nematodes, cestodes and trematodes. [3 marks]
- 24) Briefly discuss reproduction in parasitic protozoans. [4 marks]
- 25) Outline the differences between a cyst and trophozoite in parasitic protozoans. [4 marks]
- 26) Draw well labeled diagrams of fertilized and unfertilized *A. lumbricoides* egg. [2 marks]
- 27) Briefly discuss the procedure involved in collection and identification of *Enterobius vermicularis* eggs in a parasitology laboratory. [4 marks]

SECTION C (30 MARKS)

Answer Question ONE and any other Question

- 28) Discuss the morphology, lifecycle, pathology, diagnosis and control of *E. histolytica*. [15 marks]
- 29) Discuss the characteristics that differentiate the various species of plasmodium that cause malaria. [15 marks]
- 30) a) Outline the differences between the two major hookworms. [7 marks]
b) Discuss the similarity in lifecycle and pathology of hookworms. [8 marks]