



**THE KENYA POLYTECHNIC UNIVERSITY  
COLLEGE**

**SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY**

**DEPARTMENT OF BIOMEDICAL LABORATORY SCIENCES AND  
TECHNOLOGY**

**DIPLOMA IN MEDICAL LABORATORY SCIENCES**

**END OF YEAR 1 EXAMINATION**

**PARASITOLOGY**

**TIME: 3 HOURS**

**INSTRUCTIONS**

**This paper consists of TWO SECTIONS: A and B.**

**Answer ALL questions in SECTION A and B.**

**Circle the letters of ALL correct answers in each multiple choices questions**

**Any wrong answer for multiple choices will be penalized (0.5 marks)**

**SECTION A(40 MARKS)**

1. Which is the infective form of *Gardia lamblia*
  - a) trophozoite
  - b) cyst
  - c) precyst
  - d) pseudocyst
2. *Gardia lamblia* resides in
  - a) duodenum and upper part of jejunum
  - b) caecum
  - c) colon
  - d) rectum
3. *Trichomonas tenax* resides in
  - a) vagina
  - b) mouth
  - c) duodenum
  - d) caecum
4. NNN medium is employed for the cultivation of:
  - a) *Gardia lamblia*
  - b) *Trichomonas vaginalis*
  - c) *Chilomastix mesnili*
  - d) *Leishmania donovani*
5. Which is the natural host of *Balantidium coli*
  - a) Chimpanzee
  - b) Cow
  - c) Pig
  - d) Man
6. *Chilomastix mesnili* lives in :
  - a) duodenum
  - b) mouth
  - c) vagina
  - d) caecum
7. Old World leishmaniasis is caused by:
  - a) *Leishmania gambiense*
  - b) *Leishmania infantum*
  - c) *Leishmania pius*
  - d) *Leishmania incusa*
8. New World leishmaniasis is caused by:
  - a) *Leishmania donovani*
  - b) *Leishmania aethiopica*
  - c) *Leishmania tropica*
  - d) *Leishmania braziliensis* complex
9. Amastigote form of *Leishmania donovani* resides in the:

- a) reticuloendothelial system
- b) culture media
- c) erythrocytes
- d) monoocytes

10. Promastigotes form of *Leishmania donovani* is seen in the;
- a) red blood cells
  - b) culture media
  - c) hepatocytes
  - d) cells of reticuloendothelial system
11. *Leishmania donovani* can be cultivated in;
- a) brain infusion agar
  - b) Hockmeyers medium
  - c) Boeck and Drbohlav's diphasic medium
  - d) Trussell and Johnson's medium
12. *Chilomastix mesnili* has the following characteristics
- (a) Trophozoite is pear shaped body
  - (b) Trophozoite is lemon shaped
  - (c) Cyst has four nuclei
  - (d) Trophozoite is shoe shaped
13. Trophozoites of *Entamoeba histolytica* rather than cysts are most likely found in:-
- (a) Sigmoidoscopic material
  - (b) Formed faecal material
  - (c) Diarrhoetic stools
  - (d) Splenic aspirate
14. Excystation of most cysts occurs in:
- (a) Rectum
  - (b) Stomach
  - (c) Appendix
  - (d) Duodenum
15. Which of the following protozoa may be recovered from duodenal contents?
- (a) *Giardia Lamblia*
  - (b) *Balantidium coli*
  - (c) *Trichomonas vaginalis*
  - (d) *Entamoeba histolytica*
16. The gametocytes are banana shaped
- (a) *Plasmodium falciparum*
  - (b) *Plasmodium malariae*
  - (c) *Plasmodium ovale*
  - (d) *Plasmodium vivax*
17. The undulating membrane of the following runs the whole length of the body
- (a) *Trichomonas hominis*
  - (b) *Chilomastix mesnili*
  - (c) *Giardia lamblia*
  - (d) *Entamoeba histolytica*
18. The following oocysts have two internal sporocyst each with four sporozoites
- (a) *Cryptosporidium*
  - (b) *Isospora*

- (c) *Pneumocystis*
- (d) *Plasmodium*

19. *Glossina* may be vectors of:

- (a) *Plasmodium*
- (b) *Borrelia duttoni*
- (c) *Trypanosoma*
- (d) *Leishmania*

20. Reproduction where two individuals come together temporarily for the purpose of exchanging part of the nuclei material is known as:

- (a) Binary fusion
- (b) Multiple fusion
- (c) Syngamy
- (d) Budding

21. Which is the most susceptible experimental animal used for inoculation of *Leishmania donovani*:

- a) Guinea pig
- b) Hamster
- c) Rabbit
- d) Mouse

22. Kala-azar must be differentiated from:

- a) brucellosis
- b) tuberculosis
- c) yellow fever
- d) anaplasmosis

23. *Trypanosoma brucei gambiense* infection is transmitted by:

- a) female anopheles mosquito
- b) tse-tse fly
- c) triatomite bug
- d) female sandfly

24. Which of the following stage of *Trypanosoma brucei gambiense* is infective for mammalian host?

- a) metacyclic trypomastigote
- b) long slender form
- c) short stumpy form
- d) intermediate form

25. Which of the following stage of *Trypanosoma brucei gambiense* is infective to tse-tse fly?

- a) long slender form
- b) intermediate form
- c) short stumpy form
- d) metacyclic trypomastigotes

26. Commonest cause of bloody diarrhea is?

- a) *Gardia lamblia*
- b) *Entamoeba histolytica*

- c) *Toxoplasma gondii*
- d) *Naeglaria fowleri*

27. Which of the following is the largest protozoal parasite inhabiting the large intestine of man

- a) *Entamoeba histolytica*
- b) *Entamoeba coli*
- c) *Balantidium coli*
- d) *Giardia lamblia*

28. *Trypanosoma cruzi* is transmitted by:

- a) sand fly
- b) tse-tse fly
- c) house fly
- d) triatomite bug

29. Sandfly is the vector of:

- a) *Leishmania donovani*
- b) *Plasmodium falciparum*
- c) *Wuchereria bancrofti*
- d) *Brugia malayi*

30. Which is the infective form of the malaria parasite/

- a) Oocyst
- b) sporozoite
- c) Bradyzoite
- d) Tachyzoite

31. Resting stage of the malaria parasite is known as:

- a) sporozoite
- b) trophozoite
- c) merozoite
- d) hyponozoite

32. Relapse of the malaria is not seen in infection with;

- a) *Plasmodium vivax*
- b) *Plasmodium ovale*
- c) *Plasmodium falciparum*
- d) *Plasmodium berghei*

33. In *Leishmania tropica* infection amastigote form resides in;

- a) clasmatocytes of skin
- b) reticuloendothelial cells of viscera
- c) sandfly vector
- d) artificial culture medium

34. *Leishmania tropica* causes:

- a) kala-zar
- b) oriental sore
- c) espundia
- d) chicleros ulcer

35. For infection of mosquito, the blood of human carrier must contain at least;

- a) 6 gametocyte/ul

- b)8 gametocyte/ul
- c)10 gametocyte /ul
- d)12 gametocyte /ul

36. Which drug is used to eliminate exo-erythrocytic parasites in the liver?
- a)Chloroquine
  - b)Quinine
  - c)Primaquine
  - d)Mefloquine
37. Babesiosis is transmitted by bite of:
- a)mosquito
  - b)sandfly
  - c)reduvid bug
  - d)tick
38. *Toxoplasma gondii* lives in the:
- a)lumen of small intestine
  - b)lumen of large intestine
  - c)reticuloendothelial cells and many other nucleated cells
  - d)red blood cells
39. Which of the following are main reservoir hosts for *Balantidium coli*
- a) Man
  - b) Monkey
  - c) Dog
  - d) Pig
40. Spherical shaped or round shaped gametocytes are seen in all except:
- a)*Plasmodium vivax*
  - b)*Plasmodium falciparum*
  - c)*Plasmodium malariae*
  - d)*Plasmodium ovale*

**SECTION B (60 MARKS)**

41. a)Discuss in detail habitat, morphology, life cycle and of *Leishmania donovani* (12Marks)
- b) Describe the pathogenesis of *Trypanosoma cruzi*. (8 Marks)
42. a) Discuss, life cycle, morphology, laboratory diagnosis *Gardia lamblia* (10Marks)
- b) Discuss concentration by sedimentation technique of stool preparation. (10Marks).
43. a) Tabulate differences between :
- i) Amoeba trophozoites and cysts (10Marks)
  - ii) Stercorarian and salivarian transmission (5Marks)
- b) Describe preparation of thin smear for malaria diagnosis (5Marks)

