



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL LABORATORY SCIENCES

AML 2107 : MEDICAL PROTOZOOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: 16 May 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt ALL questions.

Circle the correct answer in section A.

PAPER ONE

Section A

1. *Isospora belli* and Sarcocystis species belong to the following class.
 - a. *Entamoeba*
 - b. *Endolimax*
 - c. *Ciliata*
 - d. *Leishmania*

2. Diagnosis of *Isospora belli* is based on the following
 - a. Demonstration of unsporulated oocyst in feces.
 - b. Demonstration of trophozoite in feces.
 - c. Demonstration of sporulated oocyst in feces
 - d. Demonstration of sporulated oocyst in blood
3. African trypanosomiasis is transmitted by:
 - a. Tsetse
 - b. Sand flies
 - c. Tsetse flies
 - d. House flies
4. The lemon shaped cyst is a morphological characteristic of
 - a. *Endolimax nana*
 - b. *Iodamoeba bustchlii*
 - c. *Chilomastix mesnilli*
 - d. *Giardia lamblia*
5. Infection of prostate epididymis of males is associated with the following flagellate
 - a. *Pentatrichomonas hominis*
 - b. *Trichomonas vaginalis*.
 - c. *Trichomonas tenax*.
 - d. *Giardia lamblia*
6. The following flagellates form cystic stage in life cycle except?
 - a. *Pentatrichomonas hominis*
 - b. *Giardia lamblia*
 - c. *Trichomonas vaginalis*.
 - d. *Trichomonas hominis*.

7. Dum-Dum fever or death fever also known as?
- a. African leishmaniasis
 - b. American leishmaniasis
 - c. Gambian leishmaniasis
 - d. Visceral leishmaniasis.
8. Which of the following protozoal genera is not classified as mastigophora?
- a. Chilomastix
 - b. Leishmania
 - c. Trypanostoma
 - d. Endolimax
9. Which of the following flagellates inhabit the urogenital tract of human hosts?
- a. *Giardia lamblia*
 - b. *Entamoeba coli*.
 - c. *Entamoeba histolytica*
 - d. *Trichomonas vaginalis*.
10. Which of the following trypanosomes is not pathogenic to man?
- a. *Trypanosoma rhodensiense*.
 - b. *Trypanosoma cruzi*.
 - c. *Trypanosoma lewis*.
 - d. *Trypanosoma rangeli*

11. Which of the following stages of plasmodium parasites occur in the erythrocytic cycle?
- a. Schizonts
 - b. Sporozoites
 - c. Oocysts.
 - d. Ookinates.
12. Which of the following stages of malaria parasites in exoerythrocytic cycle of plasmodium infection?
- a. Ookinates.
 - b. Merozoite
 - c. Zygote.
 - d. Oocysts
13. Which of the following stages of malaria parasites occurs in sporogonic life cycle of malaria parasites?
- a. Schizonts
 - b. Trophozoites
 - c. Sporozoites
 - d. Merozoites
14. The blood sucking sandflies is in the family of?
- a. Culicinae
 - b. Simuliidae
 - c. Anophellinae
 - d. Psychodidae.

15. In humans the free-living amoeba trophozoite can be seen in
- Blood specimen
 - Saliva specimen
 - Cerebrospinal fluid
 - Sputum
16. The protozoa which are sluggish in movement and have iodine cyst include?
- Antamoeba pollecki*
 - Dientamoeba fragilis*
 - Iodamoeba butschlii*
 - Entamoeba coli*
17. In the transmission of malaria man acts as?
- Definitive host
 - Reservoir host
 - Intermediate host
 - Permanent host
18. The following protozoa have ookinate stage during life cycle.
- Balantidium species
 - Trichomonas species
 - Plasmodium species
 - Giardia species
19. The mode of transmission of American trypanosome is by:
- Ingestion
 - Salivarian
 - Contamination
 - Tsetsefly

20. The Africa trypanosomes are transmitted by:
- Triatoma species
 - Glossina species
 - Cimex species
 - Mosquitoes
21. The American trypanosomes are transmitted by
- Triatoma species
 - Glossina species
 - Phlebotomus species
 - Cimex species
22. Which of the following trypanosomes transmit chaggas disease
- Trypanosomes gambiense*
 - Trypanosomes congolense*
 - Trypanosomes cruzi*
 - Trypanosomes rangeli*
23. Control of chaggas disease is based on the following except?
- Chemotherapy
 - Control of triatomine bugs
 - Personal protection against triatomine bugs.
 - Reduction of population of reservoir host.
24. Which of the following is not an important diagnostic feature for *Giardia Lamblia*
- Consist of two stages trophozoite and cyst.
 - It is bilaterally Symmetrical
 - It is pear shaped
 - It has four pairs of flagella

25. The following protozoa are classified as zoomastigophora except?:

- a. *Trypanosomes*.
- b. *Leishmania*
- c. *Iodamoeba butschli*.
- d. *Chilomastix*.

26. Which of the following flagellate cyst are lemon shaped with exterior hyaline knob.

- a. *Giardia lamblia*.
- b. *Trichomonas hominis*.
- c. *Trichomonas vaginalis*.
- d. *Chilomastix mesnilli*.

27. Which of the following protozoa have falling leaf movement?

- a. *Entamoeba coli*.
- b. *Chilomastix mesnilli*
- c. *Entamoeba butschilli*
- d. *Trypanosome cruzi*

28. Visceral leishmaniasis is also referred as:

- a. Changes
- b. Kala- azar.
- c. Cutaneous leshmeniasis
- d. Espundia

29. *Trypanosoma rangeli* is transmitted by infected triatomine bugs through:

- a. Triatomine bite
- b. Contamination
- c. Ingestion
- d. Tsetse bite

30. Which of the following trypanosome species cause slow onset chronic trypanosomiasis.

- a. *Trypanosomes brucei gambiense*.
- b. *Trypanosomes brucei rhodensiense*.
- c. *Trypanosomes cruzi*.
- d. *Trypanosomes cruzi* and *Trypanosome rhodensiense*

31. Game animals and livestock trypanosomiasis is caused by:

- a. *Trypanosoma brucei gambiense*.
- b. *Trypanosoma brucei rhodensiense*.
- c. *Trypanosoma brucei*
- d. Tsetse fly and triatomine bugs.

32. *Isospora belli* and *sarcocystis* species are classified in the following class:

- a. Endolimax
- b. Sporozoa
- c. Cilliata.
- d. Leishmania

33. 33) Diagnosis of *Isospora belli* is based on the following:

- a. Demonstration of unsporulated oocyst in feaces
- b. Demonstration of sporulated oocyst in feaces
- c. Demonstration of trophozoites oocyst in blood
- d. Demonstration of sporulated oocyst in urine

34. *Isospora belli* and *Sacocystis hominis* occur in:

- a. Intestinal tract
- b. Respiratory tract
- c. Mouth
- d. Blood System.

35. *Pentatrichomonas hominis* resides in the:following
- Mouth
 - Intestinal tract
 - Respiratory tract
 - Urogenital tract
36. Which of the following flagellate diagnosis is by demonstration of Trophozoites and cysts in faces?
- Chilomastix mesnilli*
 - Trichomonas vaginalis*.
 - Trichomonas tenax*.
 - Trypanosome rhodensiense*.
37. The demonstration of trophozoites in vaginal secretion, scrapings urethral discharge and sedimented urine specimens is a definitive diagnosis of:
- Trichomonas tenax*
 - Trichomonas hominis*.
 - Chilomatix mesnili*.
 - Trichomonas vaginalis*.
- a) *Entamoeba histolytica*
38. Which of the following trophozoite flagellate have diagnostic characteristic of cytostome resembling shepherd crook?
- Trichomonas vaginalis*.
 - Trichomonas tenax*.
 - Chilomastix mesnili*.
 - Pentatrichomonas hominis*.
39. Which of the following flagellate is non pathogenic
- Trichomonas hominis*

b. *Trichomonas vaginalis*

c. *Entamoeba histolytica*

d. Trypanosoma species

40. Cytostome and cytopye is a characteristic of

a. Cyst of *Giardia lamblia*

b. Trophozoite of *Giardia lamblia*

c. Cyst of *Balantidium coli*

d. *Chilomastix mesnilli*

SECTION B (60 MARKS)

QUESTION ONE

41. Discuss briefly the lifecycle of *Entamoeba histolytica* (10 MRKS)

a. Explain in details the following terms in malaria infection

i. i. Recrudescence (5 MRKS)

ii. ii. Relapse (5 MRKS)

b. Mention five (5) factors which could compare and contrast the trophozotes and cyst of *Entamoeba coli*

42. Discuss briefly the life cycle of *Cryptosporidium* species (20 MARKS)

43. Discuss the following

a. i. Describe the saprogenic life cycle of malaria parasites. (10 MRKS)

b. ii. Explain five control and preventive measures that could be institutes against malaria parasites based on aquatic stages of the diseases vectors (5 MRKS)

c. iii. Outline two general morphological features of malaria parasites when stained by Geimsa or Leishman stained. (5 MRKS)