



# TECHNICAL UNIVERSITY OF MOMBASA

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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.**

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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 *Isosporabelli* is based on the following
  - a. Demonstration of unspalation oocyst in faces.
  - b. Demonstration of trophozoile in faces.
  - c. Demonstration sporulaled oocyst in face
  - d. Demonstration of sporulated oocyst in blood
3. African trypanosomiasis is transmitted by:
  - a. Tritoma
  - b. Sand flies
  - c. Tsetse flies
  - d. House flies
4. The lemon shaped cyst is a morphological characteristics of
  - a. *Endolimax nana*
  - b. *Iodamoebabustchlii*
  - c. *Chilomastixmesnilli*
  - d. *Giardia lamblia*
5. Infection of prostate epididymis of males is associated with the following flagellate
  - a. *Pentatrichomonashominis*
  - b. *Trichomonas vaginalis.*
  - c. *Trichomonastenax.*
  - d. *Giardia lamblia*
6. The following flagellates form cystic stage in life cycle except?
  - a. *Pentatrichomonashominis*
  - b. *Giardia lamblia*
  - c. *Trichomonas vaginalis.*
  - d. *Trichomonas hominis.*

7. Dum-Dum fever or death fever also known as?
- African leishmaniasis
  - American leishmaniasis
  - Gambian leishmaniasis
  - Visceral leishmaniasis.
8. Which of the following protozoal genera is not classified as mastigophora?
- Chilomastix
  - Leishmania
  - Trypanostoma
  - Endolimax
9. Which of the following flagellates inhabit the urogenital tract of human hosts?
- Giardia lamblia*
  - Entamoeba coli*.
  - Entamoeba histolytica*
  - Trichomonas vaginalis*.
10. Which of the following trypanosomes is not pathogenic to man?
- Trypanosoma rhodensience*.
  - Trypanosoma cruzi*.
  - Trypanosoma lewis*.
  - 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?
- Antamoebapollecki*
  - Dientamoebafragilis*
  - Iodamoebabutschlii*
  - 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
  - Plasmodiumspecies
  - 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 bilaterallySymmetrical
  - It is pear shaped
  - It has four pairs of flagella

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

- a. *Trypanosomes*.
- b. *Leishmania*
- c. *Iodamoebabutschli*.
- 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. *Chilomastixmesnilli*.

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

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

28. Visceral leishmaniasis is also referred as:

- a. Changes
- b. Kala- azar.
- c. Cutaneousleishmeniasis
- 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 bruceigambiense*.
- b. *Trypanosomes bruceirhodensiense*.
- c. *Trypanosomes cruzi*.
- d. *Trypanosomes cruzi* and *Trypanosome rhodensiense*

31. Game animals and livestock trypanosomiasis is caused by:

- a. *Trypanosoma bruceigambiense*.
- b. *Trypanosoma bruceirhodensiense*.
- 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. Ciliata.
- d. Leishmania

33. 33) Diagnosis of *Isosporabeli* 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 *Sacocystishominis* occur in:

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



35. *Pentatrichomonashominis* 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?
- Chilomastixmesnilli*
  - Trichomonas vaginalis.*
  - Trichmonastenax.*
  - 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.*
  - Chilomatixmesnili.*
  - Trichmonas vaginalis.*
- a) *Entamoeba histolytica*
38. Which of the following trophozoite flagellate have diagnostic characteristic of cytostome resembling shepherd crook?
- Trichmonas vaginalis.*
  - Trichmonastenax.*
  - Chilomastixmesnili.*
  - Pentatrichomonashominis.*
39. Which of the following flagellate is non pathogenic
- Trichmonashominis*

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. *Chilomastixmesnilli*

## 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)