



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF MEDICAL SCIENCES
UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

AML 4203 : MEDICAL PROTOZOOLOGY
SPECIAL/ SUPPLEMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

DATE: Pick Date Sep 2018

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 1

Section A

1. The presence of nonpathogenic protozoa in the intestinal tract indicates:
 - a. The patient has ingested something contaminated with fecal material containing infective cysts
 - b. The patient is likely to become symptomatic within a few days to two weeks
 - c. The patient will remain asymptomatic for at least a month
 - d. The patient also has pathogenic protozoa in the intestinal tract if additional stools are examined within 10 days
 - e. Patient will asymptomatic for at least a week
2. *Balantidium coli* trophozoites and cysts are best seen in the:
 - a. Permanent stained smear

- b. Direct wet preparation
 - c. Concentration wet preparation
 - d. Agar plate culture
 - e. Harada Mori method
3. The formalin-ethyl acetate sedimentation concentration procedure for feces is used to:
- a. Demonstrate motility of helminth larvae.
 - b. Demonstrate protozoan cysts and helminth eggs.
 - c. Demonstrate motility of protozoan trophozoites.
 - d. Ovas
 - e. Cyst
4. The habitat is the large intestine.
- a *Entamoeba gingivalis*
 - b *Giardia lamblia*
 - c *Entamoeba histolytica*
 - d *Naegleria fowleri*
 - e. *Trichomonas*
5. Tissue invasion is relatively slow and tends to stimulate granuloma formation.
- a *Acanthamoeba castellanii*
 - b *Entamoeba histolytica*
 - c *Balantidium coli*
 - d *Naegleria fowleri*
 - e. *Entamoeba histolytica*
5. Each of the following parasite is transmitted by mosquitoes except:
- a. *Leishmania donovani*
 - b. *Wuchereria bancrofti*

- c. *Plasmodium vivax*
- d. *Plasmodium falciparum*

e. *Plasmodium ovale*

7. 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
 - e. It causes mucus
8. Each of the following statements concerning *Giardia lamblia* is **correct except**:
- a. *G. lamblia* has both a trophozoite and cyst stage in its life cycle
 - b. *G. lamblia* is transmitted by the fecal oral route from both human and animal sources
 - c. *G. lamblia* causes hemolytic anemia
 - d. *G. lamblia* can be diagnosed by the string test
 - e. Causes fat malabsorption

9. Trophozoites, Schizonts and gametocytes of all the malarial parasites are seen in the peripheral blood smear except;

- a. *P. falciparum*
- b. *P. malariae*
- c. *P. ovale*
- d. *P. vivax*
- e. *Plasmodium bergeri*

10. Black water fever is a special manifestation of malaria caused by;

- a. *P. falciparum*
- b. *P. malariae*
- c. *P. ovale*
- d. *P. vivax*
- e. *P. Cymongi*

11. After sporozoite gain entrance to human body it undergoes developmental cycle first in liver than in RBC, only after which fever is seen. This incubation period varies between plasmodium species, and Species has longest incubation period.

- a. *P. falciparum*
- b. *P. malariae*
- c. *P. ovale*
- d. *P. vivax*
- e. *Plasmodium bergeri*

12. Which of the following statement(s) regarding *Plasmodium falciparum* are true?

- a. Causes more severe disease in pregnancy
- b. Is associated with recurrent relapses after initial treatment because of liver hypnozoites
- c. Is not the only malaria parasite causing greater than 20% parasitaemia
- d. Infection is not typically associated with thrombocytopenia
- e. Is the only cause of cerebral malaria

13. Hypnozoite is responsible for relapse of malaria in
- a. *P. vivax*
 - b. *P. ovale*
 - c. *Plasmodium falciparum*
 - d. *Plasmodium malariae*
 - e. *Plasmodium bergeri*
14. Mosquitoes is/are the vector in the following disorder
- a. *Onchocerciasis*
 - b. Visceral leishmaniasis
 - c. *African trypanosomiasis*
 - d. *Bancroftian filariasis*
 - e. *Cutaneous leishmaniasis*

15. The pathogenic protozoan with extra-intestinal spread through blood is:
- a. *Giardia Lamblia*
 - b. *Entamoeba coli*
 - c. *Isospora belli*
 - d. *Entamoeba histolytica*
 - e. *Toxoplasma*

16. *Entamoeba histolytica* trophozoites encyst in:
- a. The wall of lower part of small intestine
 - b. The wall of the recto-sigmoid colon
 - c. The lumen of the colon
 - d. Mouth
 - e. Skin

17. *Naegleria fowleri* infection is diagnosed by:
- a. Blood film
 - b. Serological examination
 - c. Lumbar puncture
 - d. Stool
 - e. Urine

18. *Naegleria fowleri* is:
- a. Permanent parasite of man
 - b. Free living amoeba
 - c. Non pathogenic
 - d. Found in running water stream
 - e. Cold water

19. *Acanthamoeba* species cause:
- a. Chronic primary meningoencephalitis
 - b. Keratitis with blindness
 - c. Granuloma of internal organs
 - d. All of the above
 - e. None of the above

20. Liver abscess is a known complication of infection with:

- a. *Fasciola hepatica*
- b. *Giardia lamblia*
- c. *Schistosoma mansoni*
- d. *Entamoeba histolytica*
- e. Giardia

21. Regarding toxoplasmosis in humans:

- a. Becomes active in immuno-compromised patients
- b. Acute infection could be transmitted from mother to fetus
- c. Associated with cats
- d. Is mainly diagnosed by serological tests
- e. All of the above

22. *Toxoplasma gondii* is transmitted to human by:

- a. Ingestion of soil contaminated by oocyst from cats
- b. Ingestion of cysts in undercooked meat
- c. Congenital transmission from mother with acute toxoplasmosis
- d. Organ transplant and blood transfusion (infected donor)
- e. All of the above

23. *Cryptosporidium* multiplies in:

- a. The lumen of small intestine
- b. The brush border of epithelial lining of small intestine
- c. The lumen of large intestine
- d. Intestines
- e. None of the above

24. Oocyst of *Toxoplasma* is found in:

- a. Human tissue
- b. The brain of chronic patient's
- c. Faeces of infected cat
- d. Mouth
- e. all the above

25. Trophozoite of *Toxoplasma* is:

- a. Infective by ingestion
- b. Free living
- c. Found in chronic infection
- d. Obligatory intracellular parasite
- e. Free living

26. Cyst of *Toxoplasma*:

- a. Found in acute infection
- b. Found in chronic infection
- c. Found in stool of cats
- d. Dogs
- e. All the above

27. *Giardia lamblia* affects mainly:

- a. Upper small intestine

- b. Caecum
- c. Colon
- d. Rectum
- e. Stomach

28. Flask shaped ulcers in the colon are caused by:

- a. *Giardia lamblia*
- b. *Acanthamoeba*
- c. *Entamoeba histolytica*
- d. *Naegleria fowleri*
- e. *Toxocara canis*

29. In trichomonas vaginalis infection:

- a. Is caused by protozoan parasite
- b. The infective stage is the trophozoite
- c. Causes vaginal discharge in females
- d. May infect males
- e. All of the above

30. Contamination of contact lenses could lead to eye infection with:

- a. *Acanthamoeba*
- b. *Entamoeba coli*
- c. *Onchocerca volvulus*
- d. *Toxocara canis*
- e. *Loa Loa*

Section B answer all questions

31. a) Write an essay on malarial infection in man? (10 marks)

31 b). Outline the complement fixation test (10 marks)

32a). Outline the lifecycle of Trypanosomes (10 marks)

32b). Describe the pathogenesis of *Entamoeba histolytica*? 10 marks