

CHUKA



UNIVERSITY

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**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE BIOLOGY AND BACHELOR OF SCIENCE IN MICROBIOLOGY
AND BIOTECHNOLOGY**

ZOOL 333: MEDICAL PROTOZOOLOGY

STREAMS: BSc. BIO, BSc. BIOC (Y3S1)

TIME: 2 HOURS

DAY/DATE: TUESDAY 19/12/2023

2.30 P.M. – 4.30 P.M.

INSTRUCTION

- **Answer all questions in Section A and any two in Section B**

SECTION A

1. Explain briefly the difference between the following, using specific examples (6 marks)
 - a) Intermediate and reservoir host
 - b) Syngamy and conjugation
 - c) Cyclopropagative and cyclodevelopmental carriers
2.
 - a) Explain how *Theileria* invades host cells (3 marks)
 - b) Describe locomotion in parasitic protozoans. (3 marks)
3.
 - a) Outline the parasite responsible for causing the following diseases and treatment of choice:
 - a) Primary Amoebic Meningoencephalitis
 - b) Balantidiasis
 - c) Isosporiasis

b) A patient presents with abnormal vaginal discharge that was thick, yellow-green in colour, which had an unpleasant fishy smell. There was also soreness, swelling and itching around the genitals.

Describe briefly the clinical diagnosis of the causative agent and treatment of the protozoan parasite. (3 marks)

4. List the infective stages, predilection site and definitive host of the following: (6 marks)

a) *Plasmodium falciparum*

b) *Toxoplasma gondii*

c) *Eimeria tenella*

5. Illustrate the apical complex structure and give specific function of any six parts. (6 marks)

SECTION B (40 MARKS)

6. Discuss the lifecycle, pathology, diagnosis and treatment of *Entamoeba* spp. (20 marks)

7. Discuss parasitic immune evasion strategies. (20 marks)

8. a) Describe the various life cycle forms of kinoplastid flagellates. (10 marks)

b) Describe the lifecycle and clinical presentation of Chaga's disease. (10 marks)

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