

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE OF
SCIENCE IN BIOMEDICAL SCIENCE AND TECHNOLOGY

BMET 231: MEDICAL PROTOZOOLOGY

STREAM BSC (BMET) Y2S2

TIME 2 HOURS

INSTRUCTIONS:

- Answer question ONE (COMPULSORY) and any other TWO questions
- Do not write on the Question paper.

QUESTION ONE (30 MARKS)

- a) Outline the general characteristics of ~~protozoa~~ protozoa _____ (5 marks)
- b) Describe
- i. The life cycle of *Entamoeba* ~~*Histolytica*~~ *histolytica* _____ (6 marks)
- ii. The physiological and biochemical adaptations of *Entamoeba histolytica* for survival and pathogenesis in the human host _____ (6 marks)
- c) With the aid of a well labelled diagram, distinguish between a trophozoite and a cyst of *Balantidium coli*- _____ (6 marks)
- d) Describe the life cycle of *Trypanosoma brucei* ~~*gambiense*~~ *gambiense* _____ (7 marks)

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QUESTION TWO (20 MARKS)

- a) Describe the life cycle and the laboratory diagnosis of *Giardia lamblia* _____ - (10 marks)
- b) Discuss ways through which protozoan parasites evade the immunize system and cause disease in man _____ (10 marks)

1. A 22-year-old female student from coastal region presents with fever, chills, and night sweats that have persisted for one week. Physical examination reveals splenomegaly and mild jaundice. A blood smear shows ring-shaped trophozoites within red blood cells. The patient reports a history of mosquito bites in her area.

- i. Outline the likely parasitic infection and its causative organism. _____ (2 marks)
- ii. Discuss the life cycle of the parasite in man _____ (14 marks)
- iii. Describe the gold standard method of diagnosing the infection. _____ (4 marks)

QUESTION FOUR (20 MARKS)

- a) Leishmaniasis is a general term used to describe diseases caused by the hemoflagellate *of the* genus Leishmania.
- i. Discuss the transmission, life cycle, and clinical manifestations of *Leishmania braziliensis* complex. _____ (12 marks)
- b) Discuss the mode of transmission, and laboratory diagnosis of *Trichomonas vaginalis* _____ (8 marks)

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