



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE(BIOLOGY)

SZL405: MEDICAL PROTOZOOLOGY

DATE: 23/8/2022

TIME: 11.00-1.00 PM

INSTRUCTIONS

- i. Answer question one (compulsory) and any other two questions;
- ii. Illustrate your answers with diagrams wherever appropriate.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Briefly explain any three routes of infection of humans by *Toxoplasma gondii*. (3 marks)
- b) Discuss 'vectorial capacity' in the transmission of malaria in man. (3 marks)
- c) Outline the methods of asexual reproduction amongst pathogenic protists. (3 marks)
- d) Outline the various forms of Leishmaniasis. (3 marks)
- e) Use specific examples to explain the locomotory structures present in parasitic protozoa. (3 marks)
- f) Outline three positive economic importance of protozoan parasites. (3 marks)
- g) Briefly outline the diagnosis and treatment of intestinal Coccidia. (3 marks)
- h) Briefly discuss any three management practices of intestinal protozoa. (3 marks)
- i) Explain the infections of the human Central Nervous System by any three protozoans. (3 marks)
- j) Illustrate the structure of *Trypanosoma brucei rhodesiense*. (3 marks)

QUESTION TWO (20 MARKS)

Discuss the characteristics of a cryptosporidium infection in man

QUESTION THREE (20 MARKS)

- a) Explain factors that promote drug resistance to *Plasmodium falciparum* (8 marks)
- b) Explain the mechanisms of prevention of protistan infections to man from domestic canidae (12 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss an indirect life cycle of a named pathogenic haemoprotozoan (10 marks)
- b) Compare chagas disease with HAT.. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss reproduction of the malaria parasite. (12 marks)
- b) Discuss the pathology of *Balantidium coli* (8 marks)