



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES
FOURTH YEAR SUPPLEMENTARY/SPECIAL EXAMINATION FOR
BSC. BIOLOGY

SZL 405: MEDICAL PROTOZOOLOGY

DATE: 9/3/2023

TIME: 8.30 – 10.30 AM

Instructions

1. Attempt question 1 (30 marks) and any other two questions (40 marks).
2. Illustrate your answer with well labelled diagrams wherever appropriate

1. [Compulsory Question – 30 marks]

- a. Identify the reservoir hosts and infective stages of the following diseases:

- ✓ Malaria
- ✓ Trypanosomiasis
- ✓ Leishmaniasis

(3 marks)

- b. Based on locomotory structures, classify any three protozoan parasites

3 marks

- c. Outline three positive economic importance of protozoan parasites

(3 marks)

- d. Illustrate the structure of *Balantidium coli*

(3 marks)

- e. Describe the various trypanosome infections of man

3 marks

- f. Explain the prevention of protozoan infections and their management in man

(3 marks)

- g. Outline the routes of infection of intestinal protozoa in man (3 marks)
 - h. Explain Toxoplasma infection in man (3 marks)
 - i. Outline the methods of asexual reproduction in Protozoa (3 marks)
 - j. Explain the management of *Plasmodium falciparum* infection using insecticide treated bednets. (3 marks)
2. Discuss why malaria is still a killer despite the availability of appropriate management strategies (20 marks)
3. Discuss why it may not be possible to eliminate Human African Trypanosomiasis (20 marks)
4. a. Compare the life cycles of *Entamoeba histolytica* and *Balantidium coli* (10marks)
- b. Discuss 'vectorial capacity' in the transmission of malaria in man. (10 marks)
5. Discuss how microscopy can be improved to detect low parasitaemia in protozoan infections
20 marks