



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (BIOLOGY)

SZL 405 MEDICAL PROTOZOLOGY

DATE: 16/8/2021

TIME: 2:00 – 4:00 PM

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## INSTRUCTIONS

Attempt question 1 (30 marks) and any other two questions (40 marks).

Illustrate your answer with well labelled diagrams wherever appropriate

### QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Identify the reservoir hosts and infective stages of the following diseases:
- i) Malaria
  - ii) Trypanosomiasis
  - iii) 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)

**QUESTION TWO (20 MARKS)**

Discuss why malaria is still a killer despite the availability of appropriate management strategies.

**QUESTION THREE (20 MARKS)**

Discuss why it may not be possible to eliminate Human African Trypanosomiasis.

**QUESTION FOUR (20 MARKS)**

- a) Compare the life cycles of *Entamoeba histolytica* and *Balantidium coli* (10 marks)
- b) Discuss 'vectorial capacity' in the transmission of malaria in man. (10 marks)

**QUESTION FIVE (20 MARKS)**

Discuss how microscopy can be improved to detect low parasitaemia in protozoan infections.