



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

**UNIVERSITY EXAMINATION FOR:**

MSC

AML5113: MOLECULAR PARASITOLOGY

END OF SEMESTER EXAMINATION

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: 16 Apr 2016**

## **Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** Question(s). Attempt any **THREE** questions.

**Do not write on the question paper.**

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**Question ONE** Discuss in detail the molecular evidence that makes *Plasmodium falciparum* a more pathogenic strain of *plasmodium* than *P. malariae*, *P. ovale* and *P. vivax*.

**Question TWO** Describe the cause of the clinical signs of malaria pathology listed

- a) Severe anaemia
- b) Acidosis
- c) Cerebral malaria
- d) Multiorgan failure
- e) Pregnancy in malaria

**Question THREE** What is the molecular bases of antigenic variation in *Plasmodium falciparum* and African Trypanosomiasis

**Question FOUR** Describe the role of PfEMP1 in mediating malaria pathogenesis

**Question FIVE** Explain the transmission of the following human pathogens (20 marks)

- a) *Leishmania donovani*
- b) *Trypanosomes gambiense*
- c) *Toxoplasma gondii*
- d) *Babesia microti*
- e) *Trichinella spiralis*
- f) *Echinococcus granulosus*
- g) *Schistosoma mansoni*
- h) *Taenia solium*
- i) *Fasciola hepatica*
- j) *Wuchereria bancrofti*