



**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES
DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES**

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS DEGREE

NSLS206: PARASITOLOGY, MYCOLOGY AND VIROLOGY

END OF SEMESTER FINAL EXAMINATIONS

5 MAY 2021

LECTURER: DR S MUTAMBU

DURATION: 7 HOURS

INSTRUCTIONS

1. Write your candidate number on your answer sheets.
 2. Answer any **ONE** question of your choice.
 3. Each full question carries 100 marks
 4. Submit your answer scripts as PDF documents through Moodle ONLY.
 5. Use the following specifications in your answer scripts:
Font: Times New Roman
Font size: 12
Line spacing: 2.0
 6. Credit will be given for logical, systematic and neat presentations.
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Answer any ONE question

Question 1

Health personnel at **Mwago District Hospital** recorded 10 out of 300 immunosuppressed patients who had fungal opportunistic infections in one month.

- a) Name different types of fungi that may be responsible for causing the opportunistic infections attended to at the hospital and discuss their growth in culture. **(40 marks)**
- b) Illustrate and write short notes on the morphology of each fungus causing the opportunistic infections. **(40 marks)**
- c) Briefly describe the signs and symptoms caused by each fungus and how it can be treated. **(20 marks)**

Question 2

Preliminary findings of a parasitic survey conducted in the nation of **Buru Buru** on the African continent indicate that 10% of the residents who live along the many rivers of **Masaisai** District have blood, stool, urine or a mixture of parasites. Use of immunochromatographic test cards has revealed that 2.81% of all those infected with the parasite are positive for microfilariae antigen. It has also been observed during the survey that amongst those infected, a small proportion of 0.57% shows massive swelling of the leg, arm or scrotum.

- a) What parasite is responsible for the swelling in the parts of the body of those infected? Justify your answer. **(15 marks).**
- b) Describe what samples you would collect from those infected and the laboratory diagnostic tests that you would conduct to identify the infectious agent. **(30 marks)**
- c) Discuss with justification the possible transmission and life cycles of this organism. **(30 marks)**
- d) Discuss in detail the immediate and long term preventive measures that you would put in place to reduce transmission of this disease. **(25 marks)**

Question 3

Viral replication is the term used to indicate the formation of biological viruses during the infection process in the target host cells. Viruses replicate or multiply only within living cells. Therefore, in the laboratory a suspected virus must be grown using a culture method known to support its growth

- a) Illustrate and describe in detail the process of replication in viruses. **(50 marks)**
- b) Discuss the three general methods that are employed for virus cultivation. **(50 marks)**

END OF EXAMINATION