"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF HEALTH SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS DEGREE

NSLS207: PARASITOLOGY, MYCOLOGY AND VIROLOGY

END OF SECOND SEMESTER FINAL EXAMINATIONS

MAY/JUNE 2020

LECTURER: Dr S Mutambu

DURATION: 48 HOURS

INSTRUCTIONS

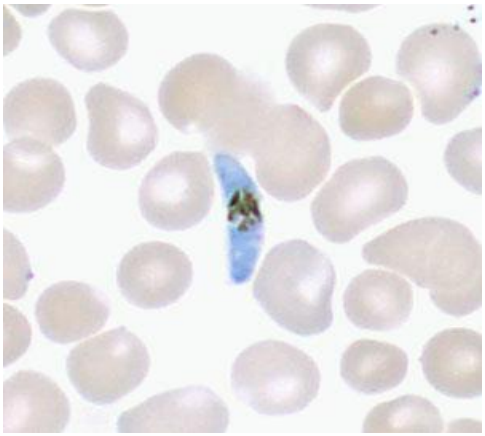
1. Write your **candidate number** on your answer sheets.
2. Answer **all** questions
3. Each question carries the marks indicated in brackets.
4. Submit your answer scripts as **word documents**.
5. Use the following specifications in your answer scripts:
   Font: Times New Roman
   Font size: 12

   Line spacing: 2.0
6. Credit will be given for logical, systematic and neat presentations.

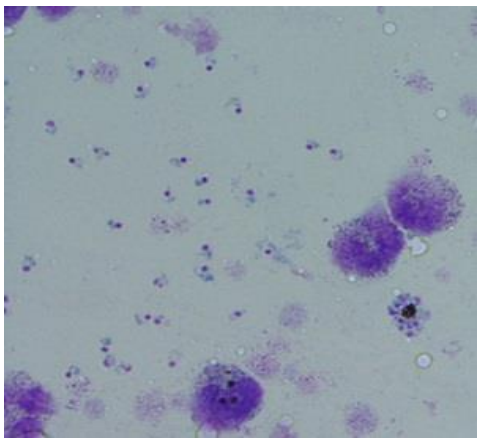
Answer ALL questions

Question 1

A 7-year old boy from the United Kingdom (UK) visited his grandmother in Zimbabwe for a month. Whilst in Zimbabwe, the boy and his grandmother went to visit relatives in the rural areas of the country during the last four days of his holiday. Upon the boy's return to the UK, he started having chills, high fever, profuse sweating, headache, nausea, vomiting, abdominal and joint pains. He visited the hospital and a blood sample was taken for laboratory analysis. You have been provided with two slides, **A** and **B** to identify the parasite causing the boy's illness.



Slide A



Slide B

a. Give a detailed account of your findings from Slide **A** and **B**, including the type of information you can get from how each slide is made. **(10 marks)**
b. Describe the staining procedure used to facilitate the visualization of Slide **A** as well as **B** and explain the principle of this procedure. **(10 marks).**

Question 2

Three preschool children **C, D** and **E** who have fungal infection have been referred to the laboratory for specimen collection and identification of the fungi. Child **C** has the infection on the head, **D** on the face and **E** on the toe nails.

a. Give a detailed account of how you would collect a suitable specimen from each child. **(10 marks)**

b. Describe the laboratory analyses that you would conduct to identify the fungus causing the infection on each child and how they may have been infected. **(20 marks)**

c. Giving examples, explain how superficial fungal infections are classified. **(10 marks)**

Question 3.

You are provided with a culture medium containing a Virus **F** which is causing skin blisters on the lips of teenage boys and girls.

a. Discuss how you can isolate Virus **F** from the teenagers. **(10 marks**)

b. Giving examples, describe in detail the techniques that you would use to cultivate **Virus F. (15 marks)**

c. Describe in detail any two methods that you would use to detect **Virus F. (15 marks)**

END OF EXAM PAPER