



**AFRICA
UNIVERSITY**
A United Methodist-Related Institution

"Investing in Africa's Future"

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL
SCIENCES**

**DEPARTMENT OF HEALTH SCIENCES
BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
SLS209: IMMUNOLOGY PRACTICAL**

END OF SECOND SEMESTER FINAL EXAMINATIONS

APRIL/MAY 2019

LECTURER: MR G. MALUNGA

DURATION: 3 HOURS

INSTRUCTIONS

Answer **all** questions on separate answer sheet provided.

The mark allocation for each question is indicated at the end of the question

Credit will be given for logical, systematic and neat presentations

Question 1

You are provided with 3 urine samples labeled **P1**, **P2** and **P3** from 3 women who are suspected to be pregnant because they have missed their monthly periods for two consecutive months. Carry out the pregnant test on the urine samples using the given test kit following the procedure below.

Pregnant test procedure

1. Take a reaction slide and label the circles P1, P2, P3 and C.
2. Gently mix the pregnancy latex reagent and place one drop of the latex reagent on each of the 4 labeled circles.
3. Using a disposable pipette, place one drop of each urine sample on the corresponding labeled circle and mix the contents of each circle using the paddle end of the pipette. Place a drop of the positive control on the circle labeled C. Use a new pipette for each circle.
4. Rotate the slide back and forth for 2 minutes and read the results.

Questions

- (a) Record your results in the form of a table [10]
- (b) Explain the principle of the pregnancy test which you have used [6]
- (c) Which sample is from a woman who is about 10 weeks pregnant. Support your answer. [5]
- (d) Sometimes a woman who is pregnant can produce a urine sample which can give a negative pregnancy test. What are the possible causes of this scenario?[5]
- (e) Which other tests can be done to confirm your results? [4]

TOTAL: 30 MARKS

Question 2

You are provided with a blood sample labelled **H** from a patient who is suspected to be infected with Hepatitis B Virus (HBV). The patient has elevated Liver Function Tests results and his eyes were yellowish.

You are required to carry out a full Hepatitis B Virus screening test using the provided One Step Multi-HBV Test kit and SOP.

- (a) Carry out the test and record your results in the form of a table [10]
- (b) Outline the principle of the test [15]
- (c) Interpret your results and give your possible diagnosis of the patient. [5]

TOTAL : 30 MARKS

Question 3

You are provided with a blood sample labelled **S** from a patient who is suspected to be infected with syphilis. You are requested to perform both the RPR Test and Syphilis Rapid test using the test kits and SOPs provided.

- a) Perform the RPR Test and record your results. [10]
- b) Outline the principle of the RPR test [5]
- c) Perform the Syphilis Rapid Test and record your results [5]
- d) Outline the principle of the Syphilis Rapid Test which you have used [5]
- e) Which of the two tests is better in screening for syphilis? Explain your answer. [5]
- f) Which other confirmatory test can be done to confirm a positive syphilis screening test result? Explain the principle of this test [10]

TOTAL: 40 MARKS