AFRICA UNIVERSITY
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COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF HEALTH SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

SLS209: IMMUNOLOGY PRACTICAL

END OF SECOND SEMESTER SUPPLEMENTARY EXAMINATIONS

APRIL/MAY 2019

LECTURER: MR G. MALUNGA

DURATION: 3 HOURS

INSTRUCTIONS

Answer **all** questions on the 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

A whole blood sample labelled **M** has been submitted for malaria test. Use a malaria Antigen *Plasmodium falciparum* Rapid Test to perform the test.

a) Perform the test using the provided test kit and record your results. [10]
b) How do you interpret the test results on the test cassette? [3]
c) Explain the principle of this test. [10]
d) Why is it that this test uses whole blood instead of serum? [2]

TOTAL: 25 MARKS

Question 2

A 28 year old woman visited an STI Clinic after discovering a yellowish discharge from her genitals. The doctor took a high vaginal swab (HVS) and a blood sample for Syphilis screening from the woman and send both specimens to the laboratory.

You are required to carry out the RPR test on the sample labelled **S** using the RPR procedure below.

The Procedure

1. Place 50 µl of sample and one drop of each +ve and –ve controls onto separate circles on the test slide.
2. Swirl the RPR-carbon reagent gently before using it.
3. Place the micropipette in a vertical position and perpendicular to the slide, and add one drop (20 µl) of this reagent next to the samples to be tested.
4. Mix the drops with a stirrer, spreading them over the entire surface of the circle. Use different stirrers for each samples.
5. Swirl the test slide using your hands for 8 minutes.
6. Read the test results immediately under bright light

a) Record your results [10]
b) Explain the principle of the RPR test [10]
c) Give your possible diagnosis using your results and the symptoms being presented by the patient [5]
d) What are the drawbacks of the RPR test? [5]
e) As a laboratory scientist what would you do to confirm your diagnosis? [5]

TOTAL: 35 MARKS

Question 3

You are provided with two blood samples from a couple which had visited an HIV Testing center. Sample **M** is from the husband and sample **F** is from the wife. You are required to perform an HIV Rapid test using the provided test kits.

a) Record your results [15]
b) Explain the principles of the tests which you have used [15]
c) Give a possible explanation of your results [5]
d) What further steps can you do to confirm your laboratory findings? [5]

TOTAL : 40 MARKS