



"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES

DEPARTMENT OF HEALTH SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

SLS 203 HAEMATOLOGY PRACTICAL EXAM

END OF SEMESTER EXAMINATIONS

NOVEMBER 2018

LECTURER: P. NAGO

DURATION: 3 HOURS

INSTRUCTIONS

Do not write your name on the answer sheet

Use Answer Sheets Provided

Begin your answer for Each Question on a New Page

Credit is Given for Neat Presentation

Question 1

- a) Using the Westergren erythrocyte sedimentation rate (ESR) procedure given below, measure the erythrocyte sedimentation rate (ESR) of the given sample marked PM and record the value (10marks)
- b) List five sources of error which must be guarded against when performing the above test. (6 marks)
- c) Name one disease state associated with an abnormal ESR value (2marks)

Westergren erythrocyte sedimentation rate (ESR) Procedure

1. Pipette 0.4 ml of sodium citrate anticoagulant into a small container.
2. Add 1.6 ml of EDTA anticoagulated blood and mix well and pour into the ESR cup.
3. Fill the Westergren pipette with the thoroughly mixed citrated blood and adjust to the '0' mark.
4. Place the pipette into the rack, ensuring it is positioned vertically and allow to stand undisturbed for 60 minutes.
5. Record the ESR value.

Question 2

Stain and estimate the platelet count on slide marked 2018.

- a) Stain using the procedure given below. (4marks)
- b) For platelet estimation, use the formula of your choice & clearly indicate the formula used. (10 marks)
- c) Record the estimated platelet count (6 marks)
- d) How do you interpret the platelet counts (6marks)?
- e) Name three causes of thrombocytopenia (6marks)

NB: The slide has already been fixed

Staining Procedure

1. Add 9 parts of buffered water to one part of stock stain (Geimsa) to prepare the working solution.
2. Put the slides on a staining rack or staining troughs.

3. Flood the fixed blood smear with the 1in10 diluted Geimsa stain and allow standing for 20 to 30 minutes. Alternatively dip the slides in diluted Geimsa in a staining trough for 20 to 30 minutes.
4. Gently wash off the stain with a stream of buffered water (tap water or distilled water may be used).
5. Tilt the slides to remove excess water. Wipe the underside of the slides and allow air-drying. Do not blot dry.