"Investing in Africa's Future"

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

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS DEGREE

SLS211: HISTOLOGY PRACTICAL

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER 2018

LECTURER: E. GOVORE

DURATION: 3 HOURS

INSTRUCTIONS

Answer **all q**uestions

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

Credit will be given for logical, systematic and neat presentations.

Section A (one hour)

1a. Using the method provided demonstrate the presence of abnormalities on the cervical smear provided (10)

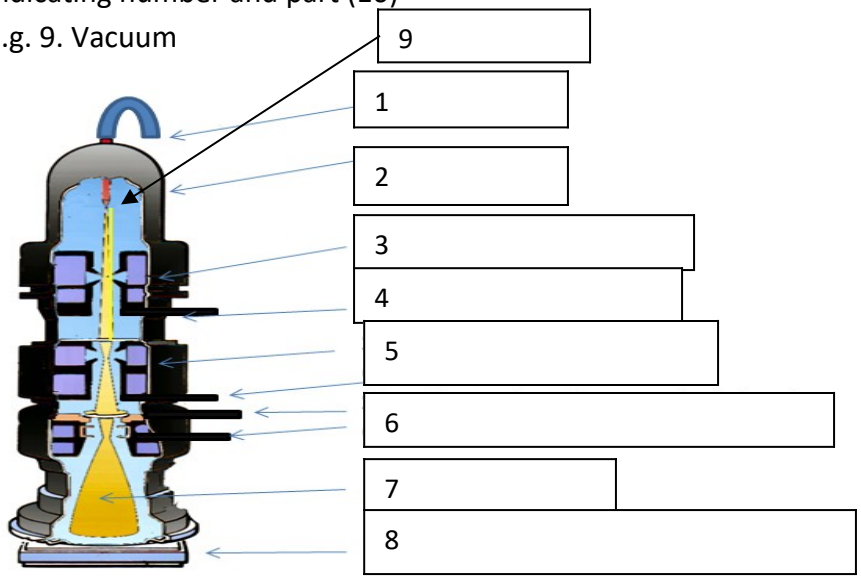
b. State the name and principle of this test (5)

c. State the results obtained using this method (5)

Total: 20 marks

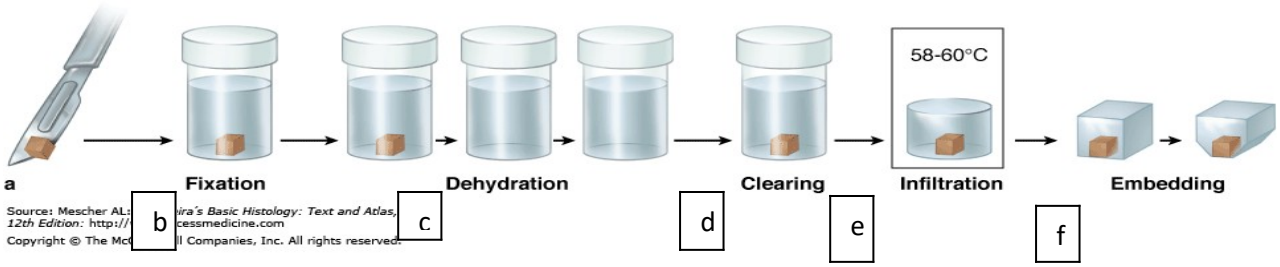
Section B (one hour 30 minutes)

1. The image below shows an electron microscope labelled 1-9. State the labelled parts indicating number and part (10)
   e.g. 9. Vacuum



Transmission Electron Microscope

2. The image shows a tissue being processed.



State the different stages and briefly explain the purpose of the six stages shown above

a.

b.

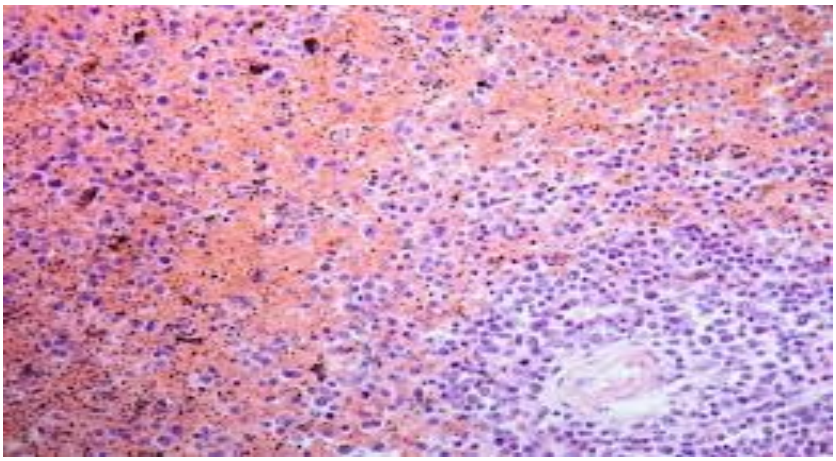
c.

d.

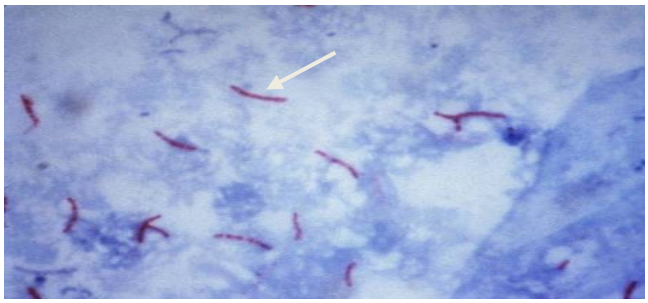
e.

f.

3. This is malaria pigment. What is a pigment (2)
   what is the effect of a pigment (3)



4. The projected image shows a stained section of acid fast bacteria

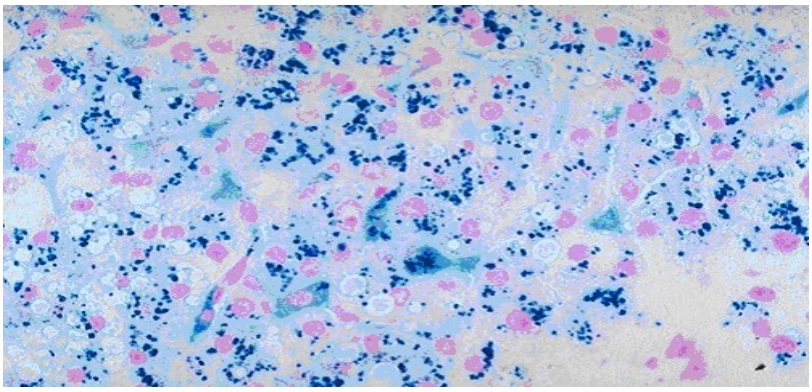


Source: CDC/Dr. George P. Kubica, 1979

a. give the full name of the special stain (1)

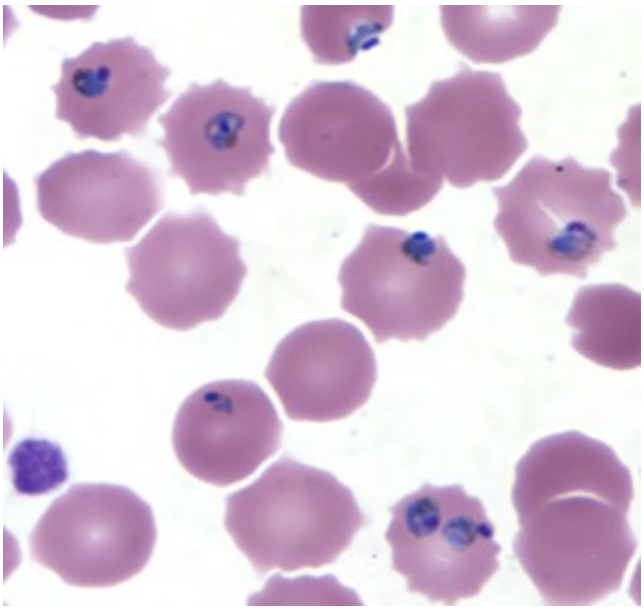
b. state the principle of the reaction (4)

5. The image below shows a stained section where iron deposits are stained blue



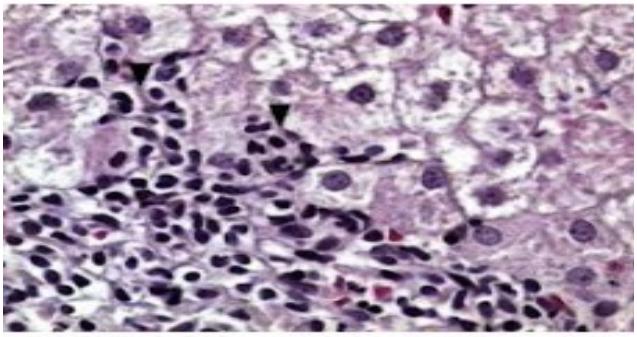
a. give the full name of the special stain (2)
b. state the principle of the reaction(3)

6. This slide with malaria parasites was stained by Giemsa stain. Give 5 other examples of Romanosky stain (5)



7. a. This woman is suffering from which disease (2)
   b. what causes this disease (3)

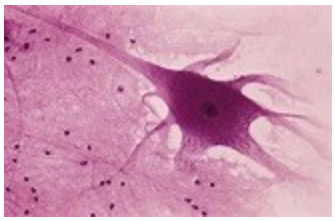
8. The slide below demonstrates lipid
   a. what is the principle of lipid stains (3)
   b. give three examples of lipid stains (2)



9. The image below shows photomicrograph of a neuron

   a. what type of neuron is it (2)

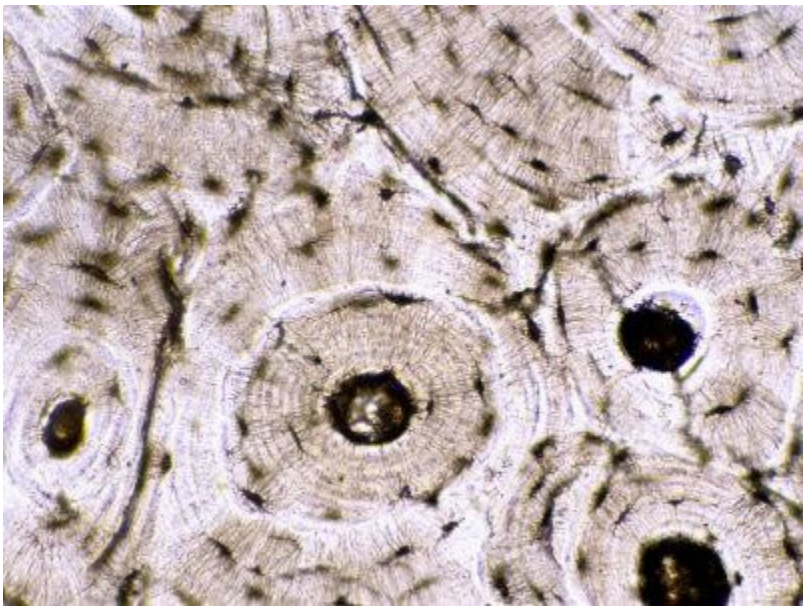
   b. State any 3parts of neurons shown (3)



10. The image below shows photomicrograph of a bone

   c. what type of bone is it (2)

d. State any 3parts of bone shown (3)



Total: 60 marks

Section C (30 minutes)

Spots on microscope

1. a. What is the name of the instrument(1)

   b. Why is it important in histology (4)

2. The spot shows a microscope lens.

   a. What is the name of the lens (1)

   b. There are inscriptions written on the lens explain what they mean (4)

3. Identify organisms on given slide and state the type of stain used (2)

4. Identify organisms on given slide and state the type of stain used (2)

5. What type of tissue is shown on slide and justify your answer (2)

6. What type of stain is indicated on slide and justify your answer (2)

7. What is shown on the picture (1)

8. What is shown on the picture (1)

Total: 20 marks

Procedure for section A

1. Dewax and take sections to water

NOTE: steps 1 have already been done for you

2. Mix equal parts of solution 1 and solution 2Place the slides in ammoniacal silver solution in a coplin jar
3. Cover section with working solution for 20 minutes
4. Rinse gently in distilled water
5. Counter stain lightly with 1% neutral red stain for 5 seconds
6. Blow dry
7. Differentiate if necessary in 95% alcohol
8. Blow dry
9. Mount in DPX