



***"Investing in Africa's future"***

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

**DEPARTMENT OF BIOMEDICAL AND MEDICAL LABORATORY**

**SCIENCES**

**BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS**

**NSLS211: HISTOLOGY PRACTICAL**

**END OF SEMESTER FINAL EXAMINATIONS**

**NOVEMBER 2023**

**LECTURER: DR M. SALISSOU**

**DURATION: 3 HOURS**

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### ***INSTRUCTIONS***

**SECTION A: Spot exam: Answer all questions on separate sheets provided**

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**SECTION B: Answer all questions on separate answer sheets provided**

**SECTION C: Answer all questions on separate answer sheets provided**

## SECTION A

### Spot exam: Answer all questions.

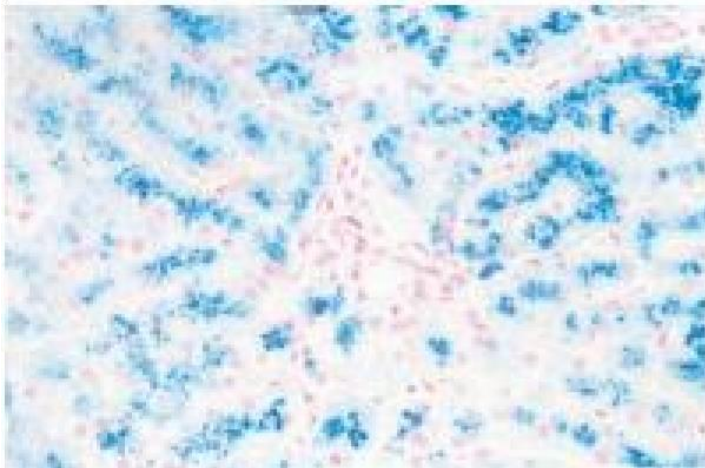
1. A 1, A2, A3, A4 and A5 are special stains in histology. For each of the stains
  - a) Identify the stain
  - b) report the results
  - c) justify your answers

[50]

## SECTION B

### Clinical case: Answer all questions

1. A 45-year-old man presents with increasing abdominal girth and yellow discoloration of his skin and sclera. Physical examination reveals hepatomegaly and jaundice.. a Histological laboratory procedure for the identification was performed and a stain of a liver biopsy is shown in Fig 1. You have been provided with the prepared slide *TBI* for examination. What is the major intracellular iron storage protein in this patient's hepatocytes?



**Fig 1**

- a) Identify the type of stain:
- b) Carefully examine the slide and report your findings (5).
- c) Explain the principle of the test (10)

- d) If your tissue was a liver biopsy explain all process to obtain paraffin embedded block of the tissue (10)

## SECTION C

### Answer all questions

1. Carry out the following staining protocol on the section provided using the method below (25).

#### **Method**

- i. Dewax sections and bring sections to water as follow:
    - a. Xylene 10 dips
    - b. Xylene 10 dips
    - c. Xylene 10 dips
    - d. Absolute alcohol 10 dips
    - e. Absolute alcohol 10 dips
    - f. 95% alcohol 10 dips
    - g. 85% alcohol 10 dips
    - h. 75% alcohol 10 dips
    - i. Rinse in tap water 1 minute
    - j. Place slide in ammoniacal silver solution and incubate at 58 to 60 degree in water bath for 30 to 60 minutes until section become yellowish brown.
    - k. Rinse in distilled water
    - l. Place the slide in 1% neutral red for two minutes
    - m. Wash in distilled water
    - n. Dehydrate and clear the section as follows:
  - ii. 75% alcohol 10 dips
  - iii. 85 % alcohol 10 dips
  - iv. 95% alcohol 10 dips
  - v. Absolute alcohol 10 dips
  - vi. Absolute alcohol 10 dips
  - vii. Xylene 10 dips.
  - viii. Xylene 10 dips
  - ix. Mount in poly-x mountant
  - x. Label your section using provided stickers.
- a) What is the name of this stain? (5)
  - b) What is the principle of this stain? (15)
  - c) What further precautions to ensure (not mentioned above) can help identify substances in the tissue (5)