



**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES
DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES**

NSLS211: HISTOLOGY

END OF SEMESTER FINAL EXAMINATIONS

LECTURER: PROF MAIBOUGE. SALISSOU

NOVEMBER 2025

DURATION: 3 HOURS

INSTRUCTIONS

1. Write your candidate number on the answer sheet provided.
2. Answer All Questions.
3. Begin your answer for each question on a new page.
4. Credit is given for neat, well-written and lucid work.

Answer all questions

SECTION A: (40marks)

Section C: Answer all questions

1. Carry out the following staining protocol on the section provided and submit your slide with your student ID for marking using the method below (15).

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 2 minutes
 - j. 2. *Working Silver Solution, microwave 20 power, 2 minutes. Check slides microscopically for adequate intensity, place in microwave a few seconds longer if needed.
 3. Rinse in distilled water.
 4. 0.1% Gold chloride, 10 minutes.
 5. Rinse in distilled water.
 6. 5% Hypo, five minutes.
 7. Wash in tap water, rinse in distilled.
 8. Nuclear-fast red, 5 minutes.
 - k. Wash in distilled water
 - l. Dehydrate and clear the section as follows:
 - ii. 75% 10 dips
 - iii. 85 % 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.
2. What is the name of this stain? (5)
3. What is the principle of this stain? (15)

4. What further precautions to ensure (not mentioned above) can help identify substances in the tissue (5)

SECTION B: (60 marks)

Spot exam

1. **A1, A2, A3, A4 and A5** are consumables in a Histology laboratory. Identify each and state their functions (30).
2. **A2, B2, C2, D2 and E2** are special stains in Histology. Identify the stains and report the results (20).
3. H 1 is a machine commonly used in histology.
 - a) Identify the machine and its working procedure (5)
 - b) State major characteristics that account for difference between H1 and cryostat (5)