



*"Investing in Africa's Future"*

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

**DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES**

**BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS**

**NSLS101: LABORATORY PRINCIPLES PRACTICAL**

**END OF FIRST SEMESTER EXAMINATIONS**

**NOVEMBER 2022**

**LECTURER: MR Z. CHIWODZA**

**DURATION: 3 HOURS**

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***INSTRUCTIONS***

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1. Answer **all** questions in both Sections **A** and **B** on separate answer sheets provided.
2. Mark allocation for each question is indicated at the end of the question.
3. Credit will be given for logical, systematic and neat presentations.
4. Read each question to the end before you start answering

## **SECTION A: SPOT EXAM [25 MARKS]**

### **Answer all questions in this Section**

There are 10 stations which have been set up in the laboratory numbered 1 to 10. For each station,

- (a)** Name the item/s shown [15]
- (b)** State it's/their use in the laboratory [10]

## **SECTION B [75 MARKS]**

### **Answer all questions in this Section**

#### **Question 1**

You are provided with Sodium Chloride granules, 3.5% Sodium Hypochlorite solution and 95% ethanol. Use these provided chemicals and laboratory apparatus to prepare the solutions in (a) to (c).

- (a)** 70ml of 10% w/v  $\text{NaCl}_{(aq)}$ . [20]
- (b)** 50ml of 1000ppm Sodium hypochlorite solution using 3.5% Sodium hypochlorite solution. [15]
- (c)** 90ml of 65% ethanol. [15]

For each of the solutions prepared:

- i. List the materials used
- ii. Fully describe the method of preparation showing all the calculations, masses and volumes used.

Label your solutions clearly showing your candidate number and the name of the solution. Submit the prepared solutions for marking.

**TOTAL: 50 MARKS**

## **Question 2**

You are provided with a stained slide marked **Z** and you are required to view it under the microscope.

- a)** Obtain a clear focus of one field and make a good drawing of what you are observing under the X40 objective lens. [15]
- b)** Describe how a microscope is maintained in good working condition? [5]
- c)** What would you consider when buying a new microscope for the laboratory [5]

**TOTAL: 25 MARKS**