



PAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY

**FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES**  
**SCHOOL OF HEALTH SCIENCES**  
**DEPARTMENT OF CLINICAL HEALTH SCIENCES**

<b>QUALIFICATION: BACHELOR OF MEDICAL LABORATORY SCIENCES</b>	
<b>QUALIFICATION CODE: 08BOHS</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: MLM711S</b>	<b>COURSE NAME: MEDICAL LABORATORY MANAGEMENT</b>
<b>SESSION: JUNE 2023</b>	<b>PAPER: THEORY</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 100</b>

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	<b>MS BELINDA ROSELIN TSAUSES</b>
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<b>INSTRUCTIONS</b>	
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.	

**PERMISSIBLE MATERIALS**

1. Non programmable calculator is allowed.

**THIS QUESTION PAPER CONSISTS OF 6 PAGES** (Including this front page)

## SECTION A (20 MARKS)

### QUESTION 1

(20)

Evaluate the statements in each numbered section and select the most appropriate answer. Write either “True” or “False” next to the corresponding number and rectify each false statement. **(One (1) mark for each true statement and 2 marks for every false statement (one (1) mark for indicating that the answer is false and one (1) mark for rectifying each false statement).**

- 1.1 The Act which regulates the registration of persons practising the allied and complementary health professions is called the Allied Health Professions Act.
- 1.2 A job analysis refers to a process that explains the tasks, duties, function and responsibilities of a position.
- 1.3 A set of procedures designed to; eliminate unlawful discrimination among applicants, remedy the results of such prior discrimination, and prevent such discrimination in the future is known as affirmative action.
- 1.4 Break-even analysis is a systematic process that businesses use to analyze which decisions to make and which to forgo.
- 1.5 The appropriation budgeting process is a continuous budget, that is updated periodically in addition to being reviewed and revised quarterly.
- 1.6 The consensus method of decision making is appropriate when there is a clear answer and there is no single expert in the group.
- 1.7 To find a solution to a problem, after brainstorming, ideas are collected, analysed and consolidated to find the most appropriate solution.
- 1.8 Supply chain management solely encompasses the planning of all activities involved in sourcing, procurement and conversion, except logistics management.

- 1.9 Namibian Association of Medical Aid Funds (NAMAF) prescribe and regulate the scope of practice of all health professionals in the medical industry.
- 1.10 A change in the mean of a control in which the new mean is continuous but different from the original mean is most likely caused by a random error.
- 1.11 You assess stock status to determine how long supplies will last.
- 1.12 After processing of the various types of laboratory data, this must be stored on a hard drive in a safe and secure way.

## SECTION B (24 MARKS)

### QUESTION 2

[8]

Analyze the following scenarios and answer the proceeding questions:

- 2.1 You are an owner of a medical laboratory and would like to apply for accreditation. Identify the ISO standard of accreditation for medical laboratories and name one (1) accreditation body your laboratory can approach. (2)
- 2.2 You placed an order for laboratory consumables with a supplier. Upon following up on your order, the supplier informs you that your goods are still in the pipeline. In your own words, explain what you understand by this statement. (2)
- 2.3 You heard that there is a vacancy for a medical laboratory scientist at ABC Medical Laboratories. You decided to contact the human resources manager, upon which he informed you that they are still busy recruiting. Clarify this statement. (2)

- 2.4 Financial forecasting is a process of predicting a company's financial future by examining historical performance data, such as revenue, cash flow, expenses, or sales. Give two (2) advantages of financial forecasting as a laboratory manager. (2)

**QUESTION 3**

**[16]**

You are a newly appointed laboratory manager at Prosperity Medical Laboratories based in Windhoek, Namibia. One of your responsibilities is to place an advertisement for a medical laboratory scientist in a local newspaper.

- 3.1 Critically assess the above statement and compile a list of sixteen (16) vital aspects of a job advertisement you need to include in this advert. Give your answers in point form. **(Half (1/2) mark for each correct answer.)** (8)
- 3.2 Specify four (4) objectives of a job description you must consider when placing a job advertisement. (4)
- 3.3 Stipulate one (1) crucial requirement you must include in your job advertisement in line with the vacancy and justify the importance of complying with this requirement. **(One (1) mark for stipulating and half (1/2) mark for justifying.)** (4)

**SECTION C (29 MARKS)**

**QUESTION 4**

**[29]**

You have been appointed as a quality manager of a newly established medical laboratory. There are various instruments that have been purchased and installed in the clinical chemistry and haematology departments.

- 4.1 Explain the significance of method validation after instrument installation. (3)



- 4.2 Briefly describe eight (8) elements you would consider in determining the analytical performance standards during instrument and test method evaluation. **(One (1) mark each for: naming the element and giving a brief description.)** (16)
- 4.3 In your own words, explain what you understand by the term “quality assurance” from a medical laboratory science perspective. (5)
- 4.4 Compile five (5) critical questions one should address when considering using patient pools as control materials. (5)

### SECTION D (27 MARKS)

#### QUESTION 5 [15]

You have a sample of 100 cases, 50 healthy and the others sick. If a test can be positive for all sick patients and be negative for all the healthy ones, it is 100% accurate. The test has been able to differentiate the healthy and sick patient exactly. Hence, the sensitivity of the test is 100% and its specificity in determining the healthy people is 100%.

**Sick Patient:** positive for disease

**Healthy:** negative for disease

- 5.1 Using the above scenario, analyze the above scenario and predict the suitability of the test based on the statistical characteristics (accuracy, specificity and sensitivity) provided. (2)
- 5.2 In another scenario, you observe that a test can only diagnose 25 out of the 50 sick patients and has reported the others as healthy. It is 75% accurate. Determine the diagnostic sensitivity, specificity and the suitability of this test. Show your calculations where possible. **(One (1) mark for each of the following: formula, calculation, the correct answer and two (2) marks for indicating the suitability of the test.)** (8)

- 5.3 Give a general comprehensive definition of epidemiology in the context of public health. (5)

**QUESTION 6 [12]**

You have recently appointed an intern for work-integrated learning in the procurement division of your laboratory. As manager you receive some documents for the procurement of reagents and realise that the intern does not have a clear understanding of the procurement process.

- 6.1 Describe the sequential process of procurement including the accompanying documentation that is required. (8)
- 6.2 Explain why box pricing is a misleading quoting practice that many laboratories fall into at some point. Provide a practical example. (4)

**END OF EXAMINATION PAPER**

**GOOD LUCK!!!**