

CANDIDATE NUMBER _____



COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

NSLS 300 LABORATORY MANAGEMENT AND ADMINISTRATION

END OF SEMESTER FINAL EXAMINATIONS

APRIL 2024

LECTURER: Dr S L Mutambu

DURATION: 3 HOURS

INSTRUCTIONS

1. Write your candidate number on the space provided on top of each page
2. Answer **all** questions in section A, PART 1 AND PART 2 on the question paper.
3. Answer **all** questions in section B on separate answer sheets provided.
4. Answer any **2** questions in section C on separate answer sheets provided
5. The mark allocation for each question is indicated at the end of the question
6. Credit will be given for logical, systematic and neat presentations in sections B and C

SECTION A

PART I: TRUE FALSE MULTIPLE CHOICE QUESTIONS [14 MARKS]

Answer **all questions** by encircling the correct response **T** for **TRUE** or **F** for **FALSE** for each statement in all the questions. Each correct response is allocated a quarter mark.

1. Medical Laboratory Services are important to all aspects of health care and they should produce results that are:
T F a) Accurate
T F b) Reliable
T F c) Technical
T F d) Timely
2. Management is a set of the following processes:
T F a) Planning
T F b) Budgeting
T F c) Problem solving
T F d) Commanding
3. The Benefits of a Quality Management System (QMS) include:
T F a) Laboratory accreditation
T F b) Improved customer satisfaction
T F c) Improved quality of products and services
T F Better management and a more technical organization
4. Aims of a Laboratory Information Management System (LIMS) are to:
T F a) Enhance the quality of data and accessibility
T F b) Improve laboratory throughput
T F c) Reduce clerical work by skilled scientists
T F d) Increase compliance to GLP, FDA regulations and ISO Standards
5. The following statement describes an organogram:
T F a) Organizational chart
T F b) Recruitment method
T F c) Relative ranks
T F d) Relationships
6. The process of monitoring performance, comparing it with goals and correcting any significant deviations is known as:
T F a) Planning
T F b) Organizing
T F c) Leading
T F d) Evaluating
7. The following are methods of staff motivation:
T F a) Setting clear mission and vision statements
T F b) Adopting a transparent performance management system
T F c) Implementing team approach to problem solving
T F d) Recruitment of a dedicated team of employees
8. The following are part of revenue of a clinical laboratory:
T F a) Reagent purchases
T F b) Salaries

- T F c) Waste disposal payments
 T F d) Processing tests for another laboratory
9. Financial ratios important to a laboratory manager include:
 T F a) Cost per test
 T F b) Labour cost per test
 T F c) Profit margin per billable test
 T F d) Workload per laboratory scientist
10. The following visual aids are useful for effective presentation:
 T F a) Flip charts
 T F b) Pictures
 T F c) Word Point
 T F d) Videos
11. A laboratory manager who is an honest person and understands how to motivate employees possess the following skill(s):
 T F a) Sales
 T F b) Interpersonal
 T F c) Managerial
 T F d) Technical
12. The selection of an individual who is best suited to a particular position and to the organization from a group of potential applicants includes:
 T F a) Planning
 T F b) Recruitment
 T F c) Enrolment
 T F d) Staffing
13. The following are key elements of good leadership:
 T F a) Vision
 T F b) Character
 T F c) A good sense of humour
 T F d) Authoritativeness
14. In financial management, laboratory managers should:
 T F a) Use data from past minutes to prepare budgets
 T F b) Understand sources of cost information
 T F c) Determine workload of each laboratory scientist
 T F d) Know the cost of each test

PART II: MULTIPLE CHOICE MATCHING QUESTIONS [6 MARKS]

Answer **all questions** by matching List I with List II. Each correct response carries one (1) mark.

LIST I	LIST II	ANSWER
A. Quality Improvement Process	i. Provides the mechanism through which personnel collect and manage such information, which is necessary to support sound and objective decision making in managing the supply chain	

B. Written report	ii. A statement which tells us minimum acceptable human qualities which helps to perform a job.	
C. Logistics	iii. Retains ultimate responsibility in achieving goals e.g. changes in technology, capital investments, and services rendered.	
D. Laboratory Director	iv. Set of activities that aim to improve and assure the safety, quality and cost efficiency of medical laboratory services.	
E. Logistics Management System	v. Part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow as well as storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements.	
F. Job specification	vi. Prepared account of what happened about a particular event presented in a formal and organized format backed with statistical evidence	

SECTION B

SHORT ANSWER QUESTIONS (20 MARKS)

Answer all questions in this section on separate answer sheets provided.

1. A laboratory manager wants to place an order for pregnancy test kits for the coming six months. He has calculated that the laboratory uses an average of 41 kits/month. Currently there are 45 kits in stock.
 - a) When should he place the next order (1 mark)
 - b) How many kits should he order? (2 marks)

2. List the components of the PDCA Cycle of Management (4 marks)
3. What tool is used by a leader to influence subordinates to follow him/her to achieve the goals of the organisation? (1 mark)
4. Name two customers that medical laboratories serve. (2 marks)
5. State two causes of anxiety. (2 marks)
6. What are the three barriers that hinder active listening in business communication? (3 marks)
7. Name any five of the eight quality principles (5 marks)

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SECTION C

LONG ESSAY ANSWERS [40 MARKS]

Answer any 2 questions from this section on separate sheets provided. Each question carries 20 marks.

- 1.** Giving examples specific to the Medical Laboratory Environment, discuss the different components of the Clinical Laboratory Administration Model.
- 2.** Giving examples that relate to the Medical Laboratory Services, discuss the main principles of any Organisational Theory of Management of your choice
- 3.** **ISO 15189** is the criteria that a Medical Laboratory must comply with to be internationally acceptable. Giving examples discuss the focus that **ISO 15189** places on management and technical requirements.
- 4.** Effective business communication skills are an important part of a company's success and productivity. Write a detailed account on the checklist that you would use to edit the Annual Report that has been produced in your laboratory before it is submitted to the Director.

THE END