



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

(MAIN CAMPUS)

**UNIVERSITY EXAMINATIONS (MAIN PAPER)
2018/2019 ACADEMIC YEAR**

SECOND YEAR SECOND TRIMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF MEDICAL LABORATORY SCIENCES**

COURSE CODE: BML 227

COURSE TITLE: LABORATORY MANAGEMENT & Q.A.

DATE: 29TH MAY 2019

TIME: 8.00 -10.00AM

INSTRUCTIONS TO CANDIDATES

This paper is divided into three sections, **A B** and **C**, carrying respectively: Multiple Choice Questions (**MCQs**), Short Answer Questions (**SAQs**) and Long Answer Questions (**LAQs**). **Answer all questions. DO NOT WRITE ON THE QUESTION PAPER.**

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over

SECTION A: Multiple Choice Questions (20 Marks)

- Q1. A tool for examining laboratory performance over time is known as?
- (a) Assessment
 - (b) Process control
 - (c) Quality control
 - (d) Quality management
- Q2. In order to excel in the management of an organization, one may consider?
- (a) Down-sizing staff
 - (b) Motivation of staff
 - (c) Culture of the facility environment
 - (d) Embracing the questioning attitude by management
- Q3. To minimize risks and prevent laboratory hazards from causing harm to the community is?
- (a) Security
 - (b) Safety
 - (c) Containment
 - (d) Ergonomics
- Q4. Service rooms in the laboratory will have the following, except:
- (a) Autoclave
 - (b) Preparation & cleaning sinks
 - (c) Culture media sterilization
 - (d) Autoanalyzers
- Q5. The following is a necessary step in planning:
- (a) Coordination of the process
 - (b) Setting objectives
 - (c) Regulation of the plan
 - (d) Controlling the process
- Q6. Which of these is not laboratory safety equipment?
- (a) Cabinet for flammable & toxic chemicals/reagents
 - (b) Fire extinguisher & fire blanket
 - (c) Eye washers
 - (d) Coulter counter
- Q7. The following is not a step in decision-making pattern process:
- (a) Identifying the problem
 - (b) Selecting problems to be tackled
 - (c) Gathering facts concerning the problem
 - (d) Consulting other people to get more alternatives
- Q8. Define a control material:
- (a) A solution whose concentration is already known
 - (b) Provides the lowest concentration of an analyte that can be readily detected
 - (c) A graphic representation of a measured variable showing limits and data values
 - (d) Gives results that require prompt, rapid clinical attention
- Q9. Testing performed to aid in medical diagnosis is called?
- (a) Endpoint assay
 - (b) Diagnostic assay
 - (c) Analytic run
 - (d) Point-of-care testing

- Q10. A laboratory safety program is important in order to:
- (a) Protect the environment
 - (b) Make the lives of employees and patients difficult
 - (c) Equip the laboratory
 - (d) Ensure facilities are available
- Q11. Specificity in laboratory quality assurance can best be described as:
- (a) Substance whose concentration is already known to a high degree of accuracy
 - (b) The probability that a test will detect an analyte when it is present in a specimen
 - (c) The extent to which a product retains the same properties as at time of manufacture
 - (d) The probability that a test will be negative when an analyte is absent from a specimen
- Q12. In McGregor's theory Y of management, it is assumed that:
- (a) Work for many people is a source of satisfaction
 - (b) People must be coerced to work by threat of punishment or deprivation
 - (c) Man dislikes work and will avoid it wherever possible
 - (d) Workers have little ambition hence avoid responsibilities
- Q13. In management, a leader:
- (a) Shows how to do things
 - (b) Tells people what must be done
 - (c) Knows everything
 - (d) Rules with law and therefore gives orders
- Q14. Which of the following is a laboratory record?
- (a) Blank stores requisition form
 - (b) Laboratory quality manual
 - (c) Laboratory test request form
 - (d) Laboratory temperature checklist marked and signed
- Q15. External laboratory proficiency test results are highly regarded as a:
- (a) Laboratory report
 - (b) Laboratory record
 - (c) Standard Operating Procedure
 - (d) Un-reviewed test result
- Q16. An example of a post-analytic occurrence frequently seen in laboratories:
- (a) Improper sample collection and storage
 - (b) Proper sample labeling
 - (c) Transcription oversights
 - (d) Proper reagent or test kit storage
- Q17. Personal particulars in curriculum vitae will include the following:
- (a) Primary school attended
 - (b) Courses and conferences attended
 - (c) Date and place of birth
 - (d) Working experience including dates
- Q18. A functioning laboratory quality management system must embrace?
- (a) Quality equipment
 - (b) Qualified personnel
 - (c) Established and implementable quality policies
 - (d) All of the above

- Q19. What is ergonomics?
- (a) Process of preventing unwanted risks and hazards from entering the lab space
 - (b) Process of minimizing risks and preventing hazards from leaving lab space
 - (c) Having policies and procedures to prevent harm to workers and other people
 - (d) Adaptations to allow safe and healthy working conditions at the lab site
- Q20. Which among these is a characteristic of a mature group?
- (a) Un-involvement of members, everyone to him/herself
 - (b) Non-understanding of each other's needs,
 - (c) Non commitment as everyone is mature
 - (d) High sense of accommodation because members tolerate one another

SECTION C: Short Answer Questions (40 Marks)

- Q21. (a) Why should we study laboratory management as a course? **(4 Marks)**
(b) Differentiate between MBA and MBWA. **(4 Marks)**
- Q22. Describe the Fredrick Hertzberg's motivation theory. **(8 Marks)**
- Q23. (a) Outline the Laissez-faire leadership style. **(4 Marks)**
(b) What steps can be taken to have effective communication? **(4 Marks)**
- Q24. Briefly describe the Deming's cycle for process improvement. **(8 Marks)**
- Q25. Outline examples of samples that should be rejected in the laboratory. **(8 Marks)**

SECTION C: Long Answer Questions (60 Marks)

- Q26. (a) Using statistical notations define the following measures in form of formulas.
- (i) Mean **(10 Marks)**
 - (ii) SD **(10 Marks)**
 - (iii) CV **(10 Marks)**
- (b) Describe the QC steps taken for media prepared in the laboratory. **(10 Marks)**
- Q27. Discuss laboratory sample storage, retention and disposal. **(20 Marks)**
- Q28. Describe Abraham Maslow's hierarchy of needs. **(20 Marks)**