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The University of Zambia

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF BIOMEDICAL SCIENCES

BMS 5910 LABORATORY MANAGEMENT TEST

DATE: 16/09/2021

TIME: 14:30HRS TO 16:00HRS

Instructions: Answer all Questions in Section A and 2 Questions in section B. Questions in section B carry equal marks. Clearly write your computer number.

SECTION A

1. The characteristics of a successful team include all these EXCEPT

- A. A credible and a strong leader
- B. Knowledgeable members
- C. Clear, documented goal and timelines
- D. Reporting to multiple reporting supervisors.

2. Steps to resolve conflicts at the work place does not include :

- A. Formulate problem statement
- B. Clarify dimensions of conflict
- C. Brainstorm the conflict in a general meeting
- D. Identify consequences of each possible solution.

3. The greatest operating expense in a laboratory's budget is:

- A. Supplies/ materials
- B. Purchase of instruments/equipment
- C. Salaries
- D. Controls, calibrators and reagents

4. The purpose of the SOP is act as a:

- A. Reference Manual
- B. Policy Manual
- C. Evaluation Document
- D. Monitoring guide

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5. When commodities are available to perform diagnostic and monitoring tests on patients where and wherever they are requested is defined as:

- A. Customer Service Center
- B. Laboratory commodity security
- C. Stock on hand
- D. Calculated Order Quantities

6. Essential data items include all these EXCEPT

- A. Stock on hand data
- B. Consumption data
- C. Losses / adjustment data
- D. Transaction data

7. The main activities that happen to laboratory reagents and supplies does not include:

- A. Used to conduct tests
- B. Moved between facilities
- C. Stored in inventory
- D. Reports to CSC for essential logistic data at ZAMMSA

8. The usage report for Laboratory commodities has:

- A. One part
- B. Two parts
- C. Zero parts
- D. Three parts

9. HIV confirmatory test is only done when the screening test result is:

- A. Reactive
- B. Non- reactive
- C. Indeterminate
- D. Negative

10. A self-administered or pre-screening HIV test is performed using:

- A. SD Bioline
- B. OralQuick
- C. Determine
- D. BioSure

11. If on calculating Order Quantity a negative result is obtained, it means a facility is:

- A. Overstocked
- B. Understocked
- C. Stocked according to plan
- D. Stocked out

12. The rationale for implementing an overall quality management system in the laboratory is to:

- A. Prevent any possibility of testing error
- B. Differentiate between qualitative and quantitative methods
- C. Prevent potential errors in the laboratory's path of workflow
- D. help to ensure that testing performed by the laboratory is accurate and reliable

13. All of the following are essential elements of the quality management system EXCEPT:

- A. Equipment management
- B. personnel management
- C. Selection of customers
- D. Process control

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14. Clinical laboratory errors cost all these EXCEPT:

- A. Time
- B. Patient outcomes
- C. Personnel effort
- D. Quantity

15. Characteristics other than technical skills a laboratory Manager might address with a Medical Laboratory Technologist applicant will include:

- A. Religious activities
- B. Professional Society activities
- C. Registration for political party
- D. Willingness to work over time.

16. To calculate total Stock on Hand, you need:

- A. Month of stock
- B. Consumption data
- C. Physical count
- D. Order Quantity

17. In calculating cost per test, direct costs include all these EXCEPT:

- A. Cost of reagents and consumables
- B. Quality Control materials
- C. Major equipment purchase and maintenance
- D. Calibrators

18. An entrepreneur who dreams big starts small and focused avoiding distractors are:

- A. Innovator
- B. Buyer
- C. Hustler
- D. Imitator

19. Why is equipment validation important in laboratory practice?

- A. It maintains a uniform pattern of corrected calibration
- B. It serves as documented performance verification.
- C. It prevents machine to lose accuracy and precision
- D. Makes it easy to buy quality equipment.

20. Basic management functions of human resource management includes:

- A. Planning, staffing and organizing
- B. Planning, organizing and coordinating
- C. Planning, organizing, directing and controlling
- D. None of the above

21. Which of the following statements is correct?

- A. Human resource management is a strategic management resource.
- B. Under human resource management, an employee is treated as a resource.
- C. Human resource management is a management of skills, talents, and abilities
- D. Human resource management lacks the organization to achieve its goal.

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22. ----- is the systematic periodic and impartial rating of an employee, Excellence to his current job and potential to a higher position.

- (A) Performance appraisal
- B. Compensation and motivation
- C. Training and development
- D. Performance indicator

23. OJT stands for

- (A) On the job training
- B. On the job technique
- C. On the job technology
- D. Off the job training

24. A ===== is a document that defines the teams mission., boundaries, back ground of the problem, teams authority , duties and resources

- A. Team
- (B) Team charter
- C. Team work
- D. Work rule

25. Which of the following is not a stage in team building?

- A Performing
- (B) Deciding
- C. Norming
- D. Storming

26. Which is the first step in problem solving?

- A. Collect and analyze data
- (B) Consider possible solutions
- (C) Identify and analyze the problem
- D. Observe, evaluate and adjust

27. System designed to continuously improve the reliability and accuracy of test results

- A. Quality control
- (B) Quality Assurance
- C. Quality management
- D. SLMTA

28. Information to complete the Usage Report Form comes from:

- A. Stock control Card only
- B. Laboratory register/ automated machine test count and previous month usage report form and stock control cards
- (C) Laboratory register/ automated machine test count and previous month usage report form.
- (D) None of the above

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29. Physical count for HIV Test kits includes:

- A. All test kits in the store room
- B. Test kits in the storeroom and testing bench
- C. Test kits from the storeroom, testing bench and all testing sites
- D. All test kits in the testing sites

30. Functions of the Health Professions Council of Zambia include

- A. Registration of all health professions including Biomedical Professionals
- B. Licensing of Health premises and health professionals
- C. Approval of training programs
- D. All the above

### SECTION B

Answer each question on separate answer paper

1. It is important for clinical laboratories to be accredited to international accreditation organizations.
  - A. Explain the benefits of accreditation (5 Marks)
  - B. Explain the relationship between SLAMTA and SLIPTA (5 Marks)
2. List the twelve Quality Management Essentials (QME) used in the clinical laboratories and explain any one of them. (10 Marks)
3. Complete the attached HIV Test DAR (10 Marks)

You are the Medical Laboratory Technologist authorized to perform HIV testing at the Main Laboratory of Laboratory Technologist at Urban Clinic, District Petauke. It is 1 October 2021. Complete the *Daily Activity Register for HIV Tests* with the following information.

On the morning of 1 September 2021, the beginning balances, lot number and expiry date of each test are:

**Determine:** 25 tests, Lot number: 979983, Expiry date: January 2022

**SD Bioline:** 15 tests, Lot number: 233123, Expiry date: March 2022

**Self-Testing:** 20 tests, Lot number: 355493, Expiry date: April 2022

You request and receive from the main store room.

40 Oral quick Self-testing kits,

100 Determine tests

20 D Bio line tests

- a. Following appropriate quality control procedures, you run a known positive sample using Determine and SD Bioline. Then, you run a known negative sample on Determine.
- b. A male client collects 1 Oraquick self-testing kit and returns with a negative result. He further requests to be tested with Determine and the result is reactive. A confirmatory test is conducted with SD Bioline and it is reactive. ✓
- c. A Female client # 144 arrives at the laboratory in the morning with a request for provider-initiated counselling and testing. The sample is screened for HIV using a Determine and the result is Reactive. A confirmatory test is done using SD Bioline, the result comes out Reactive.
- d. A female client collects 1 Oraquick self-testing kit from a community health worker and later goes to the nearest facility with a positive result. A screening test is conducted with Determine and the result is nonreactive.
- e. Shortly afterwards, a male client # 156 arrives at the clinic looking for VMMC. The doctor requests that, a blood sample be sent to the laboratory. The sample is screened using Determine. The result is Reactive. A confirmatory test is done using SD Bioline. This result is Non-Reactive.
- f. In the afternoon, a new laboratory technician begins working at the main laboratory and is trained how to conduct HIV testing by using a known positive sample on Determine and SD Bioline. This is repeated using a known negative sample on Determine.

It is now the close of business. Complete the DAR for the day, including the Summary of HIV Tests Used by Purpose. Your Physical Count for each product is;

**Determine:** 13 tests,

**SD Bioline:** 08 tests,

**OraQuick:** 14 tests

*..END OF TEST...!*

Q1

A Accreditation is a procedure by an authority body to recognize a person or organization as competent to carry out tests.

The benefit of accreditation is that organisations and personnel are able to produce reliable and reproducible results.

This is important because it uncovers the true reflection of the patient illness. This treatment will be efficacious leading to therapeutic treatment.

It's important because it brings about standardization. A sample can be sent to any accredited lab and still obtain the same results. It confers laboratory reliability and provides a laboratory license to every one across the country and the world at large.

SLIPTA manual

B ~~SLIPTA~~ is a ~~manually~~ tool that leads to recognizing a person or organization as competent to carry out tests.

It is comprised of questions such as

- are the results reliable?
- are they being produced within the agreed time?
- Are the members of staff trained?
- are the lab procedures in QMS?
- has it been been rendered competent?

while a ~~SLIPTA~~ SLAMTA

is a training tool that is comprised of many procedures to train personnel step by step.

64 training procedures.

