



UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR SECOND SEMESTER EXAMINATION IN BSc HONS (MLS)- 2020
MLSLR 3213 LABORATORY MANAGEMENT AND RECORD KEEPING

Date: 18.11.2022

Time: 2 hours

Answer all Eight questions.

Answer Part A and Part B in separate answer books.

PART A

1. The external Quality Assessment (EQA) report of the Aspartate Aminotransferase (AST) obtained in 2022 from a clinical laboratory is given below. The Internal Quality Control report of AST indicated the Mean and Standard deviation of 46.45 and 1.06, respectively. The Total Allowable Error (Tea) of AST of the above laboratory is set up as $\pm 20\%$.

EQA report of AST from January to November 2022

Month	Mean of comparison	Lab result
January	143.391	142
February	13.516	14
March	38.709	35
April	127.261	123
May	38.205	32
June	178.675	182
July	38.965	35
August	142.844	142
September	38.374	35
October	126.073	129
November	37.767	33

- 1.1. Estimate the Total %Bias and Precision for AST in the above laboratory (40 marks)
- 1.2. Calculate the Sigma value of AST by using the above data (20 marks)
- 1.3. Explain how you would choose the most suitable Westgard QC rules for AST to the above laboratory (Westgard Sigma Rule table is given separately) (20 marks)
- 1.4. List five (5) Quality Control Planning Tools which commonly used in a clinical laboratory (20 marks)

2.

- 2.1. Define "Quality Assurance" (10 marks)
- 2.2. List Ten (10) quality system essential of quality management system model of the CLSI. (30 marks)
- 2.3. Write short note on "the importance of Occurrence Management System in a clinical laboratory" (30 marks)
- 2.4. List five (5) causes for the following laboratory errors
- 2.4.1. Random error (15 marks)
- 2.4.2. Systematic error (15 marks)

3.

- 3.1 You would like to purchase a centrifuge for a clinical laboratory. Write down the steps which should be followed in the purchasing procedure. (40 marks)
- 3.2 Write notes on
- 3.2.1 Laboratory inventory (30 marks)
- 3.2.2 Importance of Standard Operating Procedures (SOP) in a clinical laboratory. (30 marks)

4.

- 4.1 Name Two (2) international organizations which involved in accreditation of clinical laboratories. (10 marks)
- 4.2 Briefly describe Two (2) international standards which can be used for the accreditation of clinical laboratories. (50 marks)
- 4.3 Briefly describe the necessary steps involved in the Accreditation process (40 marks)



PART B

5. JKS is a building supplies company that sells products to trade and private customers.

Budget data for each of the six months to March are given below:

	Oct	Nov	Dec	Jan	Feb	March
	\$000	\$000	\$000	\$000	\$000	\$000
Credit sales	500	500	500	520	520	560
Cash sales	120	120	130	150	160	180
Credit purchases	340	360	360	400	400	400
Other operating costs (excluding depreciation)	90	90	90	122	123	123

80% of the value of credit sales is received in the month after sale, 10% two months after sale and 8% three months after sale. The balance is written off as a bad debt.

75% of the value of credit purchases is paid in the month after purchase and the remaining 25% is paid two months after purchase.

All other operating costs are paid in the month they are incurred.

JKS has placed an order for four new forklift trucks that will cost \$55,000 each. The scheduled payment date is in February.

The cash balance at 1 January is estimated to be \$30,000.

You are required to prepare a cash budget for each of the THREE months of January, February and March.

(100 Marks)

6.

6.1 What do you understand by the term 'organization'? (20 marks)

6.2 State why managers are important to the organizations. (20 marks)

6.3 Management is a goal-oriented process. Explain this statement. (30 marks)

6.4 Explain whether management can be considered as a profession. (30 marks)

7.

7.1 What is meant by the term 'centralized filing system'? (20 marks)

7.2 State any three advantages and disadvantages of centralized filing system. (20 marks)

7.3 'An organization may face some consequences for not having a proper system for records management'. Explain. (30 marks)

7.4 Briefly explain the essentials of good indexing systems. (30 marks)

8.

8.1 What do you understand by the term 'e-business'. (20 marks)

8.2 State why companies are relying on e-business applications. (20 marks)

8.3 Briefly explain the following types of operations support systems;

8.3.1 Transaction processing system (10 marks)

8.3.2 Process control system (10 marks)

8.3.3 Enterprise collaboration system (10 marks)

8.4 Briefly explain any five challenges faced by managers in terms of managing information systems in an organization. (30 marks)