



FACULTY OF ALLIED HEALTH SCIENCES; UNIVERSITY OF RUHUNA

Department of Medical Laboratory Science

First End Semester Examination – February 2023

MLS 1154 Medical Laboratory Practice – SEQ

Lib.

Date: 31st January 2023

Time: 8.00 a.m. – 9.30 a.m.

Duration: 01 hour & 30 minutes

Answer all questions

Index Number:

- 1.
- 1.1 State **one** function of each of the laboratory equipment mentioned below. (20 marks)
- a) Autoclave
 - b) Incubator
 - c) Fume cupboard
 - d) Micropipettes
- 1.2 Write **two** instruments/equipment that are needed to be calibrated. (10 marks)
- 1.3 State **three** indications that call for calibration of an instrument. (15 marks)
- 1.4 Name **one** glassware that could be used for each of the following measurements. (10 marks)
- a) Critical measurements
 - b) Non-critical measurements
- 1.5 Draw the standard symbols used for following hazardous substances. (20 marks)
- a) Toxic
 - b) Radioactive
 - c) Flammable
 - d) Biohazards
- 1.6 Briefly explain how you are going to ensure safety during the use of a bunsen burner. (25 marks)
- 2.
- 2.1 Define the following terms.
- 2.1.1. Sterilization (10 marks)
 - 2.1.2. Disinfection (10 marks)
- 2.2 List **five** factors use to determine the effectiveness of the chemical disinfection. (20 marks)
- 2.3 Discuss the proper treatment methods for the following types of wastes generated in a medical laboratory, giving proper examples.
- 2.3.1. Infectious waste (15 marks)
 - 2.3.2. Pathological waste (15 marks)
- 2.4 Discuss the acceptance/rejection criteria considered in specimen reception for microbiological assessments. (30 marks)

3.

- 3.1** List **three** main phases of the total testing process. (15 marks)
- 3.2** State **two** precautions to be taken to avoid haemolysis during sample collection. (10 marks)
- 3.3** State the action of following anticoagulants (how they prevent blood clotting) used in Haematology laboratory. (15 marks)
- a) Ethylene Di-Amine Tetra-Acetic Acid (EDTA)
 - b) Sodium Citrate
 - c) Heparin
- 3.4** State the scientific basis of the following. (20 marks)
- a) In plasma glucose estimation, blood is collected into tubes with sodium fluoride
 - b) In evacuated blood collection system, blood should be collected into the plain tube before the EDTA tube.
- 3.5** Briefly describe how you would assure the quality of the test results as a medical laboratory scientist working in the laboratory. (20 marks)
- 3.6** Define the term "accreditation". (10 marks)
- 3.7** State **two** advantages of having accreditation for a laboratory. (10 marks)