



UNIVERSITY OF JAFFNA, SRI LANKA  
FACULTY OF ALLIED HEALTH SCIENCES  
FIRST YEAR SECOND SEMESTER EXAMINATION IN BScHons (MLS)- 2020

MLSIA 1264 INSTRUMENTAL ANALYSIS

Date: 02.09.2022

Time: 2 hours

ANSWER ALL SIX QUESTIONS

ANSWER PART A AND PART B IN SEPARATE ANSWER BOOKS

PART A

1.

1.1 Briefly describe the working principle of an autoclave. (20 Marks)

1.2 Draw a labeled diagram of an autoclave and indicate the usage of each component. (40 Marks)

1.3 Briefly explain on preparation and loading of materials in an autoclave. (40 Marks)

2.

2.1 Briefly describe on technologies used in weighing balances with suitable examples. (45 Marks)

2.2 Write short notes on laboratory incubators. (55 Marks)

3.

3.1 Briefly discuss the working principle of a magnetic stirrer. (30 Marks)

3.2 Briefly describe the maintenance of a centrifuge in a laboratory. (35 Marks)

3.3 Write the working principle of a water distillation apparatus and its uses. (35 Marks)

PART B

4. Write the basic principle and applications of the followings,

4.1. UV/Visible spectrophotometer. (30 Marks)

4.2. Mass spectrophotometer. (30 Marks)

4.3. Flame photometry. (40 Marks)

5.

- 5.1 State the working principle of a fluorescent microscope (30 marks)
- 5.2 Name the parts of a light microscope and mention the function of each part. (40 Marks)
- 5.3 Briefly describe on maintenance of a light microscope in a laboratory. (30 marks)

6. Write notes on

- 6.1 Class III biological safety cabinet (30 Marks)
- 6.2 Cryostat (30 Marks)
- 6.3 Phase contrast microscope (40 Marks)

