UNIVERSITY OF JAFFNA
Medical Library
FACULTY OF MEDICINE

UNIVERSITY OF JAFFNA, SRI LANKA

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

FIRST YEAR SECOND SEMESTER EXAMINATION- FEBRUARY 2017

MLSIA1264 INSTRUMENTAL ANALYSIS

DATE: 20.02.2017 **TIME: 2 Hours**

ANSWER ALL SIX QUESTIONS

ANSWER PART A AND PART B IN SEPARATE ANSWER BOOKS

PART A

1.

1.1 Draw a labelled diagram of a fractional distillation apparatus. (30 Marks)

1.2 Briefly describe the working principle of a fractional distillation apparatus. (50 Marks)

1.3 List the features of a fractional distillation apparatus. (20 Marks)

2.

2.1 Give the working principle of Enzyme Linked Immunosorbent Assay (ELISA). (15 Marks)

2.2 List the advantages of ELISA. (25 Marks)

2.3 Briefly describe the Radioimmunoassay (RIA) technique. (40 Marks)

2.4 Distinguish between accuracy and precision in measurements. (20 Marks)

3.

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

3.2

3.2.1 Draw a labelled diagram of an autoclave. (25 Marks)

3.2.2 Describe on preparation and loading of materials in an autoclave. (45 Marks)

PART B

4. Briefly explain the working principle of the followings.

4.1. Flame Photometer (30 Marks)

4.2. Fluorescence Spectrometer (30 Marks)

4.3. UV-Visible Spectrophotometer (40 Marks)

5.

5.1 Briefly describe the working principle of phase contrast microscope (30 Marks)

5.2 List the uses of phase contrast microscope (30 Marks)

5.3 List the parts of a Light microscope and briefly describe their function (40 Marks)

6. Write short notes on

6.1.Class III Biological safety cabinet (40 Marks)

6.2. Cryostat (30 Marks)

6.3. Working principle of Transmission Electron Microscope (30Marks)

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