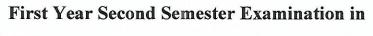
UNIVERSITY OF JAFFNA, SRI LANKA





BScHons (Medical Laboratory Sciences) - 2019

MLSMT 1213 MEDICAL LABORATORY TECHNOLOGY II

Date: 28.01.2022 Time: 2 Hour

Answer all Six Questions.

Answer Part A and B in Separate Answer Books.

1. 1.1 Explain the principle of mass spectrometry.

Part A

Name four (4) different types of mass analysers used in mass spectrometry.		
	(20 Marks)	
Give the applications of fluorescence spectroscopy.	(30 Marks)	
List the basic components and their uses of a UV-visible spectrophotometer.		
	(20 Marks)	
Explain a UV-visible spectrophotometer can be calibrated for the followings		
2.2.1 Wavelength accuracy	(20 Marks)	
2.2.2 Resolution power	(20 Marks)	
2.2.3 Stray Light	(20 Marks)	
2.2.4 Photometric accuracy	(20 Marks)	
	Give the applications of fluorescence spectroscopy. List the basic components and their uses of a UV-visible security and the	

(50 Marks)

3	Writ	te notes on		
	3.2	Freeze drying or lyophilisation	(40 Marks)	
	3.3	Principle and applications of Infrared (IR) spectroscopy	(30 Marks)	
	3.4	Potentiometric cell pCO ₂ sensor.	(30 Marks)	
		<u>Part B</u>		
4.	4.1	Give the basic Principle of electrophoresis.	(20 Marks)	
	4.2	Give the different steps used to carry out the separation	s used to carry out the separation of serum electrophoresis.	
			(40 Marks)	
	4.3	Give the labelled diagrams of serum electrophoretic pat	terns of	
		4.3.1 nephrotic syndrome patient.	(20 Marks)	
		4.3.2 multiple myeloma patient.	(20 Marks)	
5.	Expl	lain the applications of		
	5.1	Gel permeation chromatography.	(20 Marks)	
	5.2	Gas chromatography -mass spectrometry (GC-MS).	(25 Marks)	
	5.3	Hydrophobic interaction chromatography.	(30 Marks)	
	5.4	Capillary gel electrophoresis.	(25 Marks)	
6.	6.1	Explain how the polyacrylamide gel electrophoresis is o	carried out.(60 Marks)	
	6.2	Give the applications of polyacrylamide gel electrophor	resis. (40 Marks)	