

0101N1416

Candidate's Seat No : _____

M.Sc. Sem.-1 Examination

403

Bio-Medical Technology

January-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q-I	1	Write a note on microscopic aberrations.	(07)
	2	Write a note on SEM.	(07)
	OR		OR
	1	Write a note on fluorescence microscope.	(07)
	2	Explain phase contrast microscopy.	(07)
Q-II	1	Write an account of factors affecting electrophoresis mobility.	(07)
	2	Write a comprehensive note on the technique of differential centrifugation.	(07)
	OR		OR
	1	What is SDS-PAGE? Write a detailed account of it.	(07)
	2	Explain the analytical ultracentrifugation in detail.	(07)
Q-III	1	Explain briefly: UV/Vis spectroscopy concerning instruments and applications.	(07)
	2	Discuss the principle and applications of HPTLC.	(07)
	OR		OR
	1	Give a note on column chromatography in detail.	(07)
	2	What are the derivatizers used for? Give a brief note.	(07)
Q-IV	1	Explain in detail: Dialysis machine	(07)
	2	Describe blood glucometer in detail.	(07)
	OR		OR
	1	Write down in detail: Different types of endoscopy procedures and their respective applications in medical diagnosis and treatment.	(07)
	2	Write a note: Sonography	(07)
Q-V	Answer any SEVEN out of TWELVE.		
	1	What is numerical aperture? How it is useful in microscopy?	(14)
	2	Draw diagram for the various information written on microscope objective lens.	02
	3	Draw Jablonski energy diagram for the fluorescence and phosphorescence.	02
	4	What are the immobilized negatively charged groups present on the agarose matrix?	02
	5	What are the formulas to calculate the accelerating force and retarding force employed during electrophoresis?	02
	6	What is the full form of RCF and how do you convert RPM into RCF?	02
	7	Give the full form of "HPLC".	02
	8	Name the solvents used in NMR.	02
	9	Define: absorption.	02
	10	Write down the principle of pulse oximeter.	02
	11	Write down the principle and types of Thermometers.	02
	12	What are the advantages of Biomedical recorders?	02