

M.Sc. Sem.-1 Examination

403

Human Genetics

January-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q-I	1	Describe various types of microscopic aberrations.	(07)
	2	Write a note on TEM.	(07)
	OR		OR
	1	Write a note on confocal microscope.	(07)
	2	Explain principle and construction of phase contrast microscopy.	(07)
Q-II	1	Give the full form of SDS-PAGE and explain it thoroughly.	(07)
	2	What is analytical ultracentrifugation? Write a thorough explanation of it.	(07)
	OR		OR
	1	What are the different factors affecting electrophoresis mobility? Explain it.	(07)
	2	Describe the differential centrifugation method in detail.	(07)
Q-III	1	Explain briefly: UV/Vis spectroscopy concerning involved laws.	(07)
	2	Discuss the principle and applications of HPTLC.	(07)
	OR		OR
	1	Give a note on paper chromatography in detail.	(07)
	2	Write a short note on separation techniques.	(07)
Q-IV	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)
	OR		OR
	1	Describe blood glucometer in detail.	(07)
	2	Explain in detail: Dialysis machine	(07)
Q-V	Answer any SEVEN out of TWELVE.		
	1	Give definition and use of numerical aperture in microscopy.	(14)
	2	Write any four information written on microscope objective lens.	02
	3	Draw Jablonski energy diagram for the fluorescence and phosphorescence.	02
	4	You need RCF, but your values are in RPM. How would you convert it and provide the full form of RCF?	02
	5	Give the name of immobilized negatively charged groups present on the agarose matrix.	02
	6	By which formulas do you calculate the accelerating force and retarding force that appear during electrophoresis?	02
	7	Give the full form of "LC-MS".	
	8	Why should OD not exceed 1?	02
	9	Add a note on "adsorption".	02
	10	Write down the principle and types of Thermometers.	02
	11	What are the advantages of Biomedical recorders?	02
	12	Write down the principle of pulse oximeter.	02