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0101N1407

Candidate's Seat No :_____

M.Sc. Sem.-1 Examination

403

Zoology

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 a brief account of the variables influencing the mobility of electrophoresis.	(07)
	2	Explain the differential centrifugation technique.	(07)
		OR	OR
	1	Write an account on SDS-PAGE.	(07)
	2	Give a note on analytical ultracentrifugation.	(07)
Q-III	1	Explain briefly: collimating system and monochromator for UV/Vis spectroscopy.	(07)
	2	Discuss the principle, types and applications of NMR.	(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	Give a brief account of various fixatives used in tissue fixation.	(07)
	2	Describe in detail the immunohistochemical techniques.	(07)
		OR	OR
	1	Briefly explain the various categories of stains used in histological studies. Add a note on any one of the staining technique you have studied.	(07)
	2	With neat labeled diagrams explain the histology of Liver.	(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	Immobilized negatively charged groups present on agarose matrix are _____.	02
	5	Write equations for accelerating force and retarding force applied during electrophoresis.	02
	6	RPM figures are what you have, but RCF is what you need. How might it be converted and What is the full form of RCF?	02
	7	Give the full form of "HPTLC".	02
	8	Why should OD not exceed 1?	02
	9	Add a note on "Adsorption".	02
	10	What are accentuators?	02
	11	What is metachromasia?	02
	12	What are neutrophilic tissues?	02