(n)	Dialysis	4	Second S	Semester B. Sc. (Part – I) Examination
(p)	·			2S - BIOCHEMISTRY
(q)	Ultracentrifugation.	4	(Biopl	nysical and Biochemical Techniques)
(r)	Biological membrane.	4	P. Pages: 5	•
,			Time: Three I	Hours] [Max. Marks: 80
5. (a)	What is electrophoresis? Describe principle.	its 4	Note :	All questions are compulsory and carry equal marks except Q.No.1 which carries 8 marks.
(b)	Describe PAGE in brief.	4	1. (A) Fil	ll in the blanks.
(c)	What is 2-D electrophorasis?	4	(i)	pH value of an alkaline solution is than 7.
	OR	T.	(ii) Dialysis in used for removing
(p)	Mention isoelectric focussing.	4	/: :	from proteins.
(q)	What is western blotting? Give	its	(11	 The optical density is directly proportional to concentration of
	applications.	4		in solution.
(r)	Discuss Northern blotting.	4	(iv	no. phases are required. 2
6. Desc	cribe the following techniques in brief.		. ,	noose the correct alternative to complete
o. Desc	the die following techniques in biter.			e sentence.
(a)	ESR	4	(1)	Phenomenon of osmosis in opposite to that of
(b)	NMR	4		(a) Diffusion (b) Effusion
(c)	UV spectroscopy	4		(c) Affusion (d) Coagulation.
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(a) Vitamins (b) Hormones (c) Enzymes (d) Coenzymes OR (iii) Spraying reagent (locating reagent) used in amino acid separation by paper chromatography is (a) Potassium (b) Silver nitrate permanganet (c) Ninhydrin (d) Ammonia. (iv) The osmotic pressure of a solution relating to solute molecules depends on the (a) Size (b) Shape (c) Number (d) Volume. 2 (C) Answer in one sentance. (i) What is buffer system? (iii) Define electrophoresis? (iv) What is Beer's law? (a) I ree energy change. (b) Hormones (c) Redox Potential. (c) Redox Potential. (d) Pelation between standard redox potential free energy change. (p) Relation between standard redox potential free energy change. (q) Determination of ΔG of reaction. (r) Second- law of thermodynamics with applications. OR 3. Describe the paper chromatographic technique detail. OR Describe the thin layer chromatography in detail. (a) Weak acids and strong base. (b) Water as biological solvent. (c) Physiological buffers.	(i	ii) Adsorption in applic	ed in purifications of		(b)	Standard free energy.	4
(iii) Spraying reagent (locating reagent) used in amino acid separation by paper chromatography is (a) Potassium (b) Silver nitrate permanganet (c) Ninhydrin (d) Ammonia. (iv) The osmotic pressure of a solution relating to solute molecules depends on the (a) Size (b) Shape (c) Number (d) Volume. 2 (C) Answer in one sentance. (i) What is buffer system? (ii) What is active transport? (iii) Define electrophoresis? (iv) What is Beer's law? 4. Write about following:— (a) Weak acids and strong base. (b) Water as biological solvent. (c) Physiological buffers.		(a) Vitamins	(b) Hormones		(c)	Redox Potential.	4
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Discuss the following:— (a) Free energy change. (b) Water as biological solvent. (c) Physiological buffers.	(i	iv) What is Beer's law	? 4		(a)	Weak acids and strong base.	4
(a) I ree energy change. 4					(b)	Water as biological solvent.	4
	Discus	ss the following:—			(c)	Physiological buffers.	4
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2.

OR

(p) ·	Flame photometry	•	4
(q)	Mass spectroscopy		4
(r)	Fluorometry	,	4

7. What are radiations? Discuss in detail about Biological hazards of radiations.

OR

Describe various immunological techniques in detail.



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