Code No: B132103 **R13** SET - 1

II B. Pharmacy I Semester Supplementary Examinations, February/March - 2022
PHYSICAL PHARMACY-II

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1.	a)	Discuss about log probability plot and its construction.	(4M)
	b)	What is Zeta potential and explain it?	(4M)
	c)	Derive linear expression equation, equation or half-life and shelf life for zero order reaction.	(4M)
	d)	Discuss the principle and working of Hoeppler falling sphere viscometer.	(4M)
	e)	State the process of solubility of drugs in liquids.	(3M)
	f)	Discuss about Holfmeister rank order on instability of Lyophilic colloids.	(3M)

PART -B

2.	a)	Discuss 'Air permeability method 'of surface area determination.	(8M)
	b)	State about time independent non Newtonian types of flow with examples.	(8M)
3.		Define adsorption isotherm. Draw various types of adsorption isotherms and explain their behavior.	(16M)
4.	a)	Discuss the effect of following factors on solubility of drugs. (i) pH of the medium (ii) Physical forms of the drug?	(10M)
	b)	State distribution law and discuss the affect of molecular dissociation on partition coefficient.	(6M)
5.	a)	Explain about optical properties of colloids	(10M)
	b)	State the principle of Donnan membrane equilibrium.	(6M)
6.	a)	Discuss the Accelerated stability studies for the determination shelf life of drug product along with its limitations.	(10M)
	b)	A preparation was found to undergo degradation by zero order reaction. At 40^0C it has k value of 0.00011 and at 60^0C, k value is 0.00082. Then calculate energy of activation?	(6M)
7.	a)	Discuss about sensitization and protective action of hydrophilic colloids on hydrophobic colloids.	(8M)
	b)	State the principle, working of Ostwald's viscometer.	(8M)
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