GUJARAT TECHNOLOGICAL UNIVERSITY B. Pharm. – SEMESTER – III • EXAMINATION – SUMMER 2013

Subject Code: 230001		Lode: 230001 Date: 10-06-2013	
Sub	ject N	ame: Physical Pharmaceutics-II	
Time: 10.30 am - 01.30 pm Total Marks: 8			
Instr	ruction	- IS:	
	1. <i>1</i>	Attempt any five questions.	
	2. I	Make suitable assumptions wherever necessary.	
	3.]	Figures to the right indicate full marks.	
Q.1	(a)	Write in brief on concentration expressions in solutions.	06
	(b)	Write in brief on ideal and real solutions.	05
	(c)	Write in brief on properties of solutions.	05
Q.2	(a)	Derive: lowering of vapour pressure of a solution of a non electrolyte.	06
	(b)	Calculate the relative vapor pressure lowering at 20°C for a solution	05
		containing 185.25 gm of sucrose in 1000 gm of water. The molecular weight	
		of sucrose is 342.3 and the molecular weight of water is 18.02.	
	(c)	Write on molal elevation constant.	05
Q.3	(a)	Give methods to determine freezing point depression. How will you calculate	06
		molecular weight of a non volatile solute from freezing point data?	
	(b)	Give thermodynamics of osmotic pressure and vapor pressure lowering.	05
	(c)	25 gm of a material dissolved in 1000 ml of water at 25°C was found to	05
		produce an osmotic pressure of 0.5 ATM. What is the molecular weight of the	
		solute?	
Q.4	(a)	Write in short on the L value.	06
	(b)	Write in short on osmotic co-efficient for solutions of electrolytes.	05
	(c)	Write in short on metal complexes.	05
Q.5	(a)	Give classification of complexes. Write on significance of organic	06
		pharmaceutical complexes.	
	(b)	Explain protein binding.	05
	(c)	Show the difference between a zero order reaction rate and a first order rate	05
		giving suitable examples.	
Q. 6	(a)	Give methods to determine an order of reaction.	06
	(b)	Classify polymers and write on pharmaceutically important polymers.	05
	(c)	Write on diffusion of drugs in general and give Fick's first and second law of	05
		diffusion.	
Q. 7	(a)	Write on accelerated stability studies.	06
	(b)	How is dissolution of drugs relevant in study of pharmacy?	05
	(c)	Give applications of pharmaceutically relevant polymers.	05
