Seat N	No.: _		Enrolment No	
		GUJARAT TECHNOLO	GICAL UNIVERSITY	
		BPHARM – SEMESTER II • EXA	MINATION – SUMMER • 2014	
Subj	Subject code: 2220002		Date: 30-05-2014	
Subj	ect ?	Name: Pharmaceutical Chemistr	y-II(Physical Chemistry)	
•		2:30 pm - 05:30 pm	Total Marks: 80	
Instr				
	1.	Attempt any five questions.		
	2.	Make suitable assumptions wherever	necessary.	
	3.	Figures to the right indicate full mark	XS.	
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Q.1	(a)	Write a note on Freundlich and Gibbs	-	

Q.1	(a) (b)	Write a note on Freundlich and Gibbs adsorption isotherms. Define Adsorption isotherm. Explain Langmuir adsorption isotherm with limitation.	06 05	
	(c)	Discuss pharmaceutical applications of adsorption.		
Q.2	(a)	What is a catalyst? Explain homogeneous and heterogeneous catalysts with characteristics.		
	(b)	Discuss the basic principles of followings (i) Order of reaction and Molecularity of reaction (ii) Absorption and Adsorption		
	(c)	Write a note on Collision theory for reaction rates.	05	
Q.3	(a)	What is Photochemistry? Draw the Jablonski diagram and explain the Consequences of light absorption.		
	(b) (c)	<u> </u>		
Q.4	(a)	Define the following terms with example:(any four) (i) Surface tension (ii) Viscosity (iii) Refractive index (iv) Optical rotation (v) Dipole moment	06	
	(b) (c)	Explain principle of Oswald's Viscometer. Write a note on "Acid- Base Enzyme Catalysis".	05 05	
Q.5	(a) (b)	Explain in detail Entropy and Enthalpy. Write a note on Debye-Huckle theory 0		
	(c)	What is Raoult's law? Describe the deviations from Raoult's law.	05	
Q. 6	(a) (b) (c)	Explain First Law of Thermodynamics. Explain the order of reaction. Derive an equation for first order kinetic. State and explain the following Laws. (i) Henry's Law (ii) Zeroth Law of Thermodynamics		
Q.7	(a) (b) (c)	± •		
	(0)	Write a note on 'The Carnot Cycle'.		
