Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – III • EXAMINATION – WINTER 2013

Subject Code: 230001 Date: 10-12-2013

Subject Name: Physical Pharmaceutics-II

Time: 02:30 pm to 05:30 pm Total Marks: 80

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Write Roult`s law . Explain in detail about positive and negative deviation from Roult`s.	**06**
	(b)	Write short note on : Beckmann`s freezing point apparatus.	**05**
	(c)	Explain : Molarity. Molality, Normality, Formality, Gram per liter.	**05**
Q.2	(a)	Explain Fraday`s laws of electrolysis. What are its applications?	**06**
	(b)	Describe wheatstone bridge method for measurement of conductance.	**05**
	(c)	Explain : Electrolytes, Coulomb, Ampere, Ohm, Volt.	**05**
Q.3	(a)	Discuss various method to determine the order of reactions.	**06**
	(b)	Derive equations for first order reaction & its half-life.	**05**
	(c)	Discuss in detail the effect of temperature on rate of reaction.	**05**
Q.4	(a)	Write applications of complexes in pharmacy.	**06**
	(b)	Write short note on : Organic molecular complexes.	**05**
	(c)	Explain the kinetics of protein binding.	**05**
Q.5	(a)	Write pharmaceutical applications of polymers.	**06**
	(b)	Classify polymers with examples.	**05**
	(c)	Describe Gel Permeation Chromatography to determine molecular weight.	**05**
Q. 6	(a)	Explain Fick`s second law of diffusion. Write its applications.	**06**
	(b)	Explain Noye`s Whitney`s equation for the rate of dissolution.	**05**
	(c)	Write short note on dissolution apparatus USP type I.	**05**
Q.7	(a)	Discuss following routes of drug degradation (i) Hydrolysis (ii) Oxidation.	**06**
	(b)	Write short note on : Hydrogel drug delivery systems.	**05**
	(c)	Write short note on : Berkeley & Hartley`s osmometer.	**05**

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