Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharmacy Sem-III Remedial Examination 2010

Subject code: 230001 Subject Name: Physical pharmaceutics- II

Date: 09 / 03 /2010 Time: 10.30 am – 01.30 pm

Instructions: **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 & Explain Raoult`s law. Write the reasons for positive and negative deviation from Raoult`s law with reference to vapor pressure of solution.	**06**
	(b)	Describe the Beckmann method to determine freezing point lowering.	**05**
	(c)	Define and Explain : Molarity, Normality, Molality.	**05**
Q.2	(a)	Define electrolysis. Explain the process of electrolysis by giving an example.	**06**
	(b)	Write and Explain Faraday`s first Law.	**05**
	(c)	Explain : conductance, specific conductance ,equivalent conductance.	**05**
Q.3	(a)	Write reasons for degradation of drug by oxidation. Write the methods to prevent oxidation.	**06**
	(b)	Write units of rate constants. Derive equation for first order reaction.	**05**
	(c)	Explain the plot of log K against 1/T with reference to accelerated stability.	**05**
Q.4	(a)	Write detail note on " Chelates ".	**06**
	(b)	Write mechanism & applications of drug – caffeine complexes.	**05**
	(c)	Explain formation of quinhydrone complexes & picric acid complexes with examples.	**05**
Q.5	(a)	Describe various dialysis methods to evaluate drug- protein binding.	**06**
	(b)	Write applications of protein binding.	**05**
	(c)	Explain kinetic of protein binding.	**05**
Q. 6	(a)	Describe various methods to determine molecular weight of polymer.	**06**
	(b)	Write Pharmaceutical applications of polymers.	**05**
	(c)	Explain importance of crystallinity of polymer in mechanical strength of polymer.	**05**
Q.7	(a)	Write and explain Fick`s first and second laws of diffusion.	**06**
	(b)	Define dissolution rate. Write & explain Noye`s – whitney`s equation for dissolution.	**05**
	(c)	Write applications of diffusion & dissolution.	**05**

****