Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. - SEMESTER–3 • EXAMINATION – SUMMER -2018

Subject Code: 230001 Date: 28/04/2018

Subject Name: Physical Pharmaceutics - II

Time: 02:30 PM TO 05:30 PM Total Marks: 80

Instructions:

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

Q.1	**(a)**	Describe the methods for determination of boiling point elevation.	**06**
	(b)	Describe osmotic pressure as a colligative property.	**05**
	(c)	Define Raoult's law. Explain positive and negative deviations from Raoult's law.	**05**
Q.2	**(a)**	Define: molarity, normality, molality, osmolality and vapor pressure.	**06**
	(b)	Describe Debye-Heckel theory for strong electrolytes.	**05**
	(c)	Describe Arrhenius theory of electrolytic dissociation.	**05**
Q.3	**(a)**	Describe properties of solutions of electrolytes.	**06**
	(b)	Explain Faraday's law.	**05**
	(c)	Derive equations for first order reaction & its half-life.	**05**
Q.4	**(a)**	Write a short note on accelerated stability study.	**06**
	(b)	Describe the factors which govern the rate of a chemical reaction.	**05**
	(c)	Discuss various methods to determine the order of reactions.	**05**
Q.5	**(a)**	Write applications of complexes in pharmacy.	**06**
	(b)	Write note on protein binding.	**05**
	(c)	Give classification of complexes.	**05**
Q. 6	**(a)**	Write in short on metal complexes.	**06**
	(b)	Give detailed classification of polymers.	**05**
	(c)	Write a note on hydrogel drug delivery system.	**05**
Q.7	**(a)**	Describe pharmaceutical applications of polymers.	**06**
	(b)	Explain Fick's first law of diffusion.	**05**
	(c)	Describe the USP type-II dissolution apparatus with labelled diagram.	**05**

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