Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. - SEMESTER–II • EXAMINATION – SUMMER-2016

Subject Code: 220003   **Date: 08/06/2016**
Subject Name: Pharm. Chemistry-II
Time: 10:30 am – 01:30 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)**	Give types of intermolecular forces & discuss their effect on matter.	**06**
	(b)	Define dipole moments with its units. Discuss how dipole moment effects different physical properties.	**05**
	(c)	What is optical activity? Described instrument used to measure optical activity.	**05**
Q.2	**(a)**	Give differences between additive, constitutive & colligative properties with examples.	**06**
	(b)	Define & explain surface tension, viscosity & refractive index. Discuss method of measurement of surface tension, viscosity.	**10**
Q.3	**(a)**	What is true solution? Give units of expression of concentration. Define equivalent weight.	**06**
	(b)	Give differences between ideal & real solution. State & explain Raoult's law.	**05**
	(c)	Calculate freezing point of a solution containing 5.0 g sucrose (mol.wt 342) & 500 g of water. Freezing point depression constant is 1.86^0	**05**
Q.4	**(a)**	Explain extensive property, system, thermodynamic state, closed system.	**04**
	(b)	State and explain first law of thermodynamic giving equation under various conditions.	**06**
	(c)	Explain with suitable example heat of formation, heat of combustion and heat of reaction.	**06**
Q.5	**(a)**	Explain adsorption, adsorption isotherm and amphiphile.	**06**
	(b)	Discuss application of kinetics in pharmacy	**05**
	(c)	Discuss application of adsorption.	**05**
Q. 6	**(a)**	Explain rate of reaction, order of reaction & molecularity of reaction.	**06**
	(b)	Discuss method of determining order of reaction.	**05**
	(c)	Aspirin undergoes first order decomposition. 250mg aspirin converted to 150mg in 40 hrs. Calculate half-life and rate constant.	**05**
Q.7	**(a)**	Write notes on (i) Lambert –Beer's law (ii) Jablonski diagram (iii) Radioactivity (iv) Application of radio activity.	**16**

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