Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM – SEMESTER II • EXAMINATION – WINTER • 2014

Subject code: 220003   **Date: 03-12-2014**
Subject Name: Pharmaceutical Chemistry - II
Time: 02:30 pm - 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)	Differentiate thermochemistry and photochemistry.	**06**
	(b)	Discuss absorption of light by matter and their application in pharmacy	**05**
	(c)	Describe terms: Quantum efficiency, wavelength, absorption, monochromator	**05**
Q.2	(a)	Describe about surface tension and methods used to determine it.	**06**
	(b)	Define terms: optical rotation, fluorescence, Heat of neutralization, refractive index.	**05**
	(c)	Describe principle of ostwarld's viscometer.	**05**
Q.3	(a)	Describe Raoult's law in detail.	**06**
	(b)	Describe terms: Dipolemoment, Reverse osmosis, Delisquence, osmotic pressure	**05**
	(c)	Write a note on partition co-efficient.	**05**
Q.4	(a)	Write note on Gibbs adsorption isotherm.	**06**
	(b)	Describe application of adsorption in pharmaceuticals.	**05**
	(c)	Write difference between physical and chemical adsorption.	**05**
Q.5	(a)	Write a note on Debye- Huckel theory.	**06**
	(b)	Describe: Specific conductivity, equivalent conductivity, conductance, cell constant	**05**
	(c)	Describe: Kinetic, order of reaction, molecularity of reaction and catalyst	**05**
Q. 6	(a)	Discuss effect of temperature on rate of reaction.	**06**
	(b)	What is a triple point for water? Explain its importance in changes of state.	**05**
	(c)	State and explain first law of themodynamics	**05**
Q.7	(a)	Describe application of radio activity in pharmacy.	**06**
	(b)	Write a note on ' Geiger- Muller Counter"	**05**
	(c)	Describe units of radio activity in detail.	**05**

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