

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 ostwald's viscometer.	05
Q.3	(a)	Describe Raoult's law in detail.	06
	(b)	Describe terms: Dipole moment, Reverse osmosis, Deliquescence, 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 thermodynamics	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
