

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM – SEMESTER II • EXAMINATION – WINTER - 2013

Subject code: 220003

Date: 20-12-2013

Subject Name: Pharm Chemistry II

Time: 10:30 am to 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	Define viscosity and explain in detail any two methods for measurement of	06
	(a) viscosity.	
	(b) Define any five of the followings	05
	1. Partition coefficient 2.Parachor 3. Optical activity	
	4. Radioactivity 5. Refractive index 6. Boiling point	
	(c) Discuss the characteristics of Homogeneous and Heterogeneous catalysis.	05
Q.2	(a) What is order of reaction? Derive reaction rate constant, half life reaction for First order reaction.	06
	(b) Give the detail application of Radiopharmaceuticals in pharmacy.	05
	(c) Write a note on Giger Muller counter.	05
Q.3	(a) Explain in detail “Debye-Huckle theory”	06
	(b) What is optical rotation and specific rotation write a detail note on measurement of optical activity.	05
	(c) Explain “Beer’s Lambert’s law of photochemistry”	05
Q.4	(a) Write a detail note on First law of thermodynamics	06
	(b) What is phase rule? Describe the phase diagram of water.	05
	(c) Explain in detail “Jablonski Diagram”	05
Q.5	(a) Define real solution and explain in detail Raoult’s law for dilute solution.	06
	(b) What is adsorption isotherm? Explain Gibb’s adsorption isotherm.	05
	(c) Give the difference between physical and chemical adsorption.	05
Q. 6	(a) Write a detail note on Carnot cycle.	06
	(b) Define any five of the followings	05
	1. Phase rule 2. Catalyst 3.Isotopes 4.Curie 5.Absorption 6.REM	
	(c) What is the importance of Rate process in pharmaceuticals?	05
Q. 7	(a) What are the colligative properties of dilute solutions? Explain freezing point depression in detail.	06
	(b) Explain in detail (Any two)	05
	1. Entropy 2.Enthalpy 3.Heat of combustion	
	(c) Give the detail note on component systems.	05
