

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER– II• EXAMINATION – SUMMER - 2018

Subject Code: 220003**Date: 24/05/2018****Subject Name: Pharmaceutical 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** (a) What is adsorption? Write note on Gibbs adsorption isotherm. **06**
(b) Write a note on Debye Huckel theory. **05**
(c) Differentiate between Thermochemistry and Photochemistry. **05**
- Q.2** (a) State and explain first law of thermodynamics with various modifications. **06**
(b) Discuss the methods of determination of order of reactions. **05**
(c) Define and explain surface tension, optical activity and refractive index. **05**
- Q.3** (a) State the distribution law. Explain partition coefficient with suitable example in detail. **06**
(b) Write a note on joule Thomson effect. **05**
(c) Write in detail about the factors affecting viscosity. **05**
- Q.4** (a) Define Colligative properties. Enlist different types of it and explain in detail any two. **06**
(b) Define C_p and C_v . State their relation. **05**
(c) Write a short note on Carnot cycle. **05**
- Q.5** (a) What is radioactivity? What are the different types of radiations emitted by radioactive substances? Explain it in detail. **06**
(b) Write an informative note on Geiger Muller counter. **05**
(c) State the applications of radioactivity. **05**
- Q.6** (a) Define half-life of a reaction. Prove that half-life of a first order reaction is independent of the initial concentration. **06**
(b) State and explain Henry's law. **05**
(c) Explain important characteristics of Enzyme catalysis. **05**
- Q.7** (a) Define viscosity. Explain in detail any two methods for measurement of viscosity. **06**
(b) Define surface tension. Explain drop weight method for the determination of surface tension. **05**
(c) What is phase rule? Discuss water system with reference to phase rule. **05**