

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.**

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|-------------|---|-----------|
| 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 |