

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 3 EXAMINATION – SUMMER -2019

Subject Code: 230001**Date: 30-05-2019****Subject Name: Physical Pharmaceutics - II****Time: 02:30 PM TO 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) Explain effect of dielectric constant on rate constant. **06**
(b) Write short note on: Beckmann's freezing point apparatus. **05**
(c) What are colligative properties? Describe boiling point elevation. **05**
- Q.2** (a) Discuss Arrhenius theory of electrolytic dissociation. **06**
(b) Discuss ideal and real solutions with suitable examples. **05**
(c) Explain: Molarity, Molality, Normality, Formality, Gram per liter. **05**
- Q.3** (a) Define first order reaction. Derive equations for first order reaction and its half-life and shelf-life. **06**
(b) Enumerate factors affecting the rate of reaction. Explain effect of temperature on it. **05**
(c) Define order of reaction. Describe methods used to determine the same. **05**
- Q.4** (a) What is accelerated stability analysis? Describe ICH guidelines for stability study. **06**
(b) Describe the various drug decomposition pathways with remedial measures. **05**
(c) Define Hydrogels. Classify and explain its role in drug delivery system **05**
- Q.5** (a) Write detail about the applications of complexes in pharmacy. **06**
(b) Explain the kinetics of protein binding. **05**
(c) Classify the complexes and explain importance of chelates in metal ion complexes. **05**
- Q. 6** (a) Describe the pharmaceutical applications of polymers. **06**
(b) Define polymers. Give detailed classification of polymers. **05**
(c) Enlist synthetic polymers. Discuss any two general properties of polymer solutions. **05**
- Q.7** (a) Describe the method for studying in vitro drug diffusion. **06**
(b) What is dissolution? Discuss its significance in drug therapy **05**
(c) Describe in vitro dissolution test apparatus as per Indian Pharmacopoeia. **05**
