

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.

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