

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 3- EXAMINATION –WINTER - 2018

Subject Code:230001

Date: 30/11/2018

Subject Name: Physical Pharmaceutics - 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) | State Raoult's law. Explain positive and negative deviations from Raoult's law with suitable examples. | 06 |
| | (b) | Define: Molarity, Normality and Molality. State the Henry's law. | 05 |
| | (c) | Describe Ostwald-Walker method of measuring the relative lowering of vapour pressure. | 05 |
| Q.2 | (a) | Describe Arrhenius theory of electrolytic dissociation. | 06 |
| | (b) | Describe the Beckmann method to determine freezing point lowering. | 05 |
| | (c) | State & Explain Faraday's laws of Electrolysis. | 05 |
| Q.3 | (a) | Discuss various factors affecting on rate of reaction. | 06 |
| | (b) | Explain various methods to determine the order of reactions. | 05 |
| | (c) | Define first order reaction. Derive equations for first order reaction and its half-life and self-life. | 05 |
| Q.4 | (a) | Define Complexation. Classify various types of complexes. | 06 |
| | (b) | Write applications of complexes in pharmacy. | 05 |
| | (c) | Write note on protein binding. | 05 |
| Q.5 | (a) | Define and Classify the polymers with examples. | 06 |
| | (b) | Write a note on: Characterization of polymers. | 05 |
| | (c) | Describe the pharmaceutical applications of polymers. | 05 |
| Q. 6 | (a) | Define Diffusion and Flux. Explain Fick's first and second law of diffusion. | 06 |
| | (b) | Define Dissolution. Explain the Noyes Whitney equation for describing rate of drug dissolution. | 05 |
| | (c) | Describe the USP type-I & II dissolution apparatus with labeled diagram. | 05 |
| Q.7 | (a) | Write a short note on Accelerated stability study. | 06 |
| | (b) | Describe Debye-Heckel theory for strong electrolytes. | 05 |
| | (c) | Discuss the general properties of polymer solutions. | 05 |
