

# C.U.SHAH UNIVERSITY

## Winter Examination-2018

**Subject Name:** Physical Pharmaceutics I -Theory

**Subject Code:** BP302T

**Branch:** B.Pharm

**Semester:** 3

**Date :** 29/11/2018

**Time :** 02:30 To 05:30

**Marks :** 75

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

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**Q-1 Define the following terms: (20)**

- a) Raoult's law
- b) Glassy state
- c) Anionic surfactants
- d) Nonpolar solvent
- e) Isotonic solutions
- f) Dielectric constant
- g) Buffer capacity
- h) Surface free energy
- i) Protein binding
- j) Real solution

**Attempt the following questions:**

**Q-2 Attempt any two of following : (20)**

- A** Define "phase". Describe phase rule concerned with the system containing two components **10**
- B** Write a note on Factors influencing solubility **10**
- C** Classify and discuss the applications of surface active agents in pharmaceutical formulations **10**

**Q-3 Attempt any Seven of following : (35)**

- A** Define polymorphism. Discuss the significance of polymorphism in pharmacy **5**
- B** Define adsorption isotherm. Draw various types of adsorption isotherms and explain their behaviour **5**
- C** Explain capillary rise method **5**
- D** Describe the solute-solvent interactions that influence the solubility of drug in liquids **5**
- E** Write a short note on Spreading coefficient **5**
- F** Describe the method of calculation of HLB by different techniques **5**
- G** Enlist the methods for adjusting tonicity and pH. Explain any one **5**
- H** Classify types of complex. Explain inclusion complex in detail **5**
- I** Write a note on Aerosols **5**

