## C.U.SHAH UNIVERSITY Winter Examination-2021

Subject Name: Physical Pharmaceutics I - Theory					
Subject Code: BF	P302T	Branch: B.Pharm			
Semester: 3	Date: 14/12/2021	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.

## Q-1 Attempt the following questions:

(20)

- a) pKa value
- **b**) Ionization
- c) Solubility
- d) Normality
- e) Latent heat
- **f**) Sublimation
- g) Glassy state
- h) Dielectric constant
- i) Dipole moment
- j) Spreading coefficient

## Attempt the following questions:

Q-2		Attempt any two of following :	(20)
	Α	Classify inclusions complexes. Describe the nature of intermolecular interactions	10
		with suitable examples for each type.	
	В	Define adsorption isotherm. Draw various types of adsorption isotherms and	10
		explain their behavior.	
	С	Describe in detail characterization of amorphous solids.	10
Q-3		Attempt any Seven of following :	(35)
	Α	Explain phase rule.	5
	В	Explain the Raoult's law for ideal and real solution	5
	С	Write a note on Eutectic mixtures.	5
E	D	Describe the method of calculation of HLB by different techniques	5
	Ε	Write a note on Aerosols	5
	F	Enlist the methods for adjusting tonicity and pH. Explain any one	5
	G	Define surface tension. Explain the capillary rise method.	5
	Η	What do you mean by biological buffers? Explain any one buffer from this category.	5
	Ι	What is Henderson-Hasselbalch equation? Give its applications in pharmaceutical sciences.	5

