

C.U.SHAH UNIVERSITY**Winter Examination-2015****Subject Name : Physical Pharmacy I****Subject Code : 4PS03PHP1****Branch : B.Pharm****Semester : 3****Date :3/12/2015****Time :2:30 To 5:30****Marks : 70**

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: (14)

- a) "Brownian movement".
- b) "real solutions".
- c) "glassy state".
- d) "Anionic surfactants".
- e) "Multiple emulsions".
- f) "Microemulsions".
- g) "sedimentation parameters".
- h) "Buffers".
- i) "Vesicles".
- j) "Stokes' law"
- k) "Foams and defoamers"
- l) "Solubilisation".
- m) "isotonic solutions".
- n) "amphoteric drugs".

Attempt any four questions from Q-2 to Q-8**Q-2 Attempt all questions (14)**

1. Describe phase rule concerned with the system containing two components. (5)
2. Write a note on Polymorphism. (5)
3. Write a note on Define liquid crystals. (4)

Q-3 Attempt all questions (14)

1. Describe the solute-solvent interactions that influence the solubility of drug in liquids. (5)
2. Write a note on solubility of solids in liquids (5)
3. Describe the method of calculation of HLB by different techniques (4)

Q-4 Attempt all questions (14)

1. Explain any one method to determine Molecular weight of non electrolytes solutions. (5)
2. Describe the Adsorption at the solid-liquid interface. (5)



3. Describe the Micellisation. (4)
- Q-5 Attempt all questions (14)**
1. Define Suspensions and differentiate between flocculated and deflocculated suspensions. (5)
2. Explain the theory behind Stability of Emulsions. (5)
3. Explain capillary rise method. (4)
- Q-6 Attempt all questions (14)**
1. Describe protective colloid. (5)
2. Write a note on zeta potential. (5)
3. Write a short note on solubility of gases in liquid. (4)
- Q-7 Attempt all questions (14)**
1. Explain Flick's first law of diffusion and its Applications (7)
2. Write a note on Noye's – whitney's equation for dissolution. (7)
- Q-8 Attempt all questions (14)**
1. Describe the type-I & type-II U.S.P. dissolution apparatus with labeled diagram (7)
2. Write a note on Spreading coefficient. (7)

