

B.Pharm. Sixth Semester (C.B.S.) Examination
PHARMACEUTICS—VI (Physical Pharmacy)
Paper—1

Time : Three Hours]

[Maximum Marks : 80

N.B. :— (1) Question No. 1 is compulsory.

- (2) Solve any *four* questions from the remaining.
- (3) Draw neat labelled diagram wherever necessary.
- (4) Discuss the reaction, mechanism wherever necessary.

1. Solve any *five* :

- (a) What is complexation ? Give types of complexes.
 - (b) How does temp. affect drug stability ?
 - (c) Explain glass transition with examples.
 - (d) Define partition coefficient. Explain the significance of it.
 - (e) Describe in brief various Non-Newtonian Systems.
 - (f) Define Diffusion. Explain in brief Fick's law of diffusion.
 - (g) Explain in brief about bulges and spurs. 4×5=20
2. (a) Derive Scatchard Hildebrand equation. 8
 - (b) Elaborate various solute solvent interactions. 7
3. What is thixotropy ? Explain antithixotropy and rheopexy. Write in detail about measurement of thixotropy. 15
4. (a) Describe in detail thermal properties of polymers. 8
 - (b) Discuss various pharmaceutical applications of polymers. 7
5. (a) Explain solubility and pH titration method for determination of complexes. 8
 - (b) Explain in detail steady state diffusion. 7
6. Explain effect of solvent and catalysis on rate of chemical reaction. 15
7. Write short notes on (any *two*) :
 - (a) Accelerated stability study
 - (b) Determination of diffusion coefficient
 - (c) Two component system containing liquid phases. 7.5×2=15