Fifth Semester Examination For the Degree of Bachelor of Pharmacy

PHARMACEUTICS V (PHYSICAL PHARMACY)

5T1

Time : Three Hours] [Max. Marks : 80

N. B. : (1) Question No.1 is Compulsory.
(2) Attempt any **Four** questions from the remaining.
(3) Draw neat labeled diagram wherever necessary.
(4) Discuss the reaction, mechanism wherever necessary.
(5) Use of electronic calculator is permitted.
(6) Assume suitable data wherever necessary.

1. Solve any **Five** :—
   (a) Emulsions are generally milky. Justify.
   (b) Define HLB. Classify surfactants according to HLB scale.
   (c) What are lyophobie colloids ?
   (d) Differentiate flocculated and deflocculated suspensions.
   (e) How are micro emulsions different from emulsion.
   (f) Define spreading coefficient. Write significance of –ve spreading coefficient.
   (g) Explain in short mechanism of particle consolidation. 5x4=20

2. Explain in detail factors affecting micelle formation.

3. How is charge developed on a particle dispersed in a medium ? Define zeter potential and explain its role in stability of dispersed system. 15

4. Explain the methods to determine molecular weight of colloids. 15

5. (a) Explain adsorption of gases on solid surface. 7
   (b) Describe adsorption technique for surface area determination. 8

6. What are fundamental and derived properties ? Explain particle size determination by sedimentation method. 15

7. Write short notes on any **two** :—
   (a) Stabilization of emulsion.
   (b) Peptization and coacervation of colloids.
   (c) Donnan Membrane equilibrium.
   (d) Controlled flocculation. 15