

B.Pharm II Year II Semester (R13) Supplementary Examinations May/June 2017

PHYSICAL PHARMACY – II

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- State first Fick's law of diffusion.
 - Write the applications of complexation.
 - Define shelf life. Give second order shelf life formula.
 - Write two applications of chemical kinetics.
 - Relate contact angle with miscibility.
 - Define required HLB value.
 - Define angle of repose and give its significance.
 - What is yield value?
 - Define protective colloid and give one example.
 - Write note on rheology of suspensions.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Define solubility. Discuss the factors affecting solubility of solids in liquids.

OR

- 3 State Nernst distribution law. Give its applications and limitations.

UNIT – II

- 4 Discuss the methodology of accelerated stability testing. How it is useful in predicting shelf life of a drug?

OR

- 5 Derive an integrated rate equation for a first order reaction. Discuss the interrelationship between initial concentration and half-life period of first order reaction.

UNIT – III

- 6 Discuss Freundlich and Langmuir adsorption isotherms.

OR

- 7 Explain the formation of electrical double layer at the interface with the help of a neat diagram.

UNIT – IV

- 8 Explain Non-Newtonian types of flow with examples

OR

- 9 Enlist derived properties of powder. Explain coulter counter method of determination of particle size with neat diagram.

UNIT – V

- 10 Define emulsion and emulsifying agent. Discuss in detail the various theories of emulsification.

OR

- 11 Explain in detail electrical properties of colloids.
