Code: 13R00405

R13

B.Pharm II Year II Semester (R13) Supplementary Examinations May/June 2018
PHYSICAL PHARMACY – II

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
   (a) Define Henry's law and mention its applications.
   (b) Give two applications of inclusion complexes in pharmacy.
   (c) Define zero order reaction and give two examples.
   (d) Name the methods for stabilization of products against oxidation.
   (e) Name the methods for determination for HLB value and mention their advantages.
   (f) Define interfacial tension and name the methods for its determination.
   (g) Write the advantages of cone and plate viscometer.
   (h) Define angle of repose and mention its significance.
   (i) Write about protective colloid action.
   (j) Define sedimentation parameters.

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

UNIT – I

2   Explain the influence of surfactants, pH and solvents on solubility of drugs.

OR

3   Give the classification of complexes and write about organic molecular complexes and their applications.

UNIT – II

4   (a) Derive an equation for calculation of first order reaction rate constant. How first order reaction is different from zero and second order reactions?
   (b) The initial concentration of drug in a solution was found to be 500 units/mL. It was found to contain 300 units/mL after 40 days following first order decomposition. Calculate the time required for decomposing the initial concentration to 250 units/mL.

OR

5   Explain the prediction of shelf life by using temperature as stress condition.

UNIT – III

6   Differentiate between 'absorption' and 'adsorption'. Discuss the significance of HLB scale.

OR

7   Write about electrical properties of interfaces.

UNIT – IV

8   Write about the methods for determination of surface area.

OR

9   Write about plastic, pseudoplastic and dilatant systems and their applications.

UNIT – V

10   Explain the theories of emulsification and instability conditions of emulsions.

OR

11   What are colloids? Explain their optical and kinetic properties.