Code No: B2103/R10

$\boxed{\textbf{Set No.1}}$

II B.Pharmacy I Semester Supplementary Examinations, May 2017
PHYSICAL PHARMACEUTICS

Time: 3 hours   Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
$\star\star\star\star\star$

1. (a) Define solubility and explain how the solubility of a drug can be expressed.
   (b) Write notes on solvent solute interactions.   [8+7]

2. (a) List out the various methods of analysis of complexes and discuss about any one method for the determination of their stability constant and stoichiometric ratios.
   (b) Classify inclusion complexes. Describe the nature of intermolecular interactions with suitable examples.   [8+7]

3. (a) Discuss about the various methods to determine the order of a reaction.
   (b) Compare the kinetics of first and zero order reaction with suitable examples. [8+7]

4. (a) What are surfactants? Give suitable chemical classification of surfactants and mention their importance.
   (b) Explain the following terms(i) Surface tension (ii) Interfacial tension (iii) Surface free energy (iv) Spreading coefficient.   [10+5]

5. (a) Discuss the principle and procedure involved in particle size determination by microscopy. Give the advantages and disadvantages of the method.   [8+7]
   (b) Discuss the principle and procedure involved in particle size determination by sieving. Give the advantages and disadvantages of the method.

6. (a) Explain in detail about Newtonian systems.
   (b) Explain in detail about plastic systems.   [8+7]

7. Discuss about various optical properties of colloids. Write their significance in pharmacy.   [15]

8. Discuss the factors which improve the physical stability of emulsions.   [15]

$\star\star\star\star\star$