

UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
SECOND YEAR SECOND SEMESTER EXAMINATION – January 2013
PHARMACEUTICS III – PHACE 2202

Paper II

Date: 20.02.2013.

Time: 02 Hours

ANSWER ALL EIGHT QUESTIONS

1.
 - 1.1. Explain the importance of solubility in pharmacy. (20Marks)
 - 1.2. Describe the different types of solvents. (50Marks)
 - 1.3. List the factors that affect the solubility of weak electrolytes. (30Marks)
2.
 - 2.1. What is colloid? (10Marks)
 - 2.2. Give 05 examples for colloid pharmaceutical preparations. (20 Marks)
 - 2.3. Describe the purification of colloidal dispersions. (70 Marks)
3.
 - 3.1. Define the following.
 - 3.1.1 Sedimentation volume. (10Marks)
 - 3.1.2 Degree of flocculation. (10Marks)
 - 3.2. List the interfacial properties of suspended particles. (20Marks)
 - 3.3. How stability of a suspension is affected by the properties mentioned in 3.2. (60Marks)
4.
 - 4.1. What is shear thickening system? (10 marks)
 - 4.2. Briefly describe the mechanism of shear thickening system. (50 marks)
 - 4.3. Describe the rheological behavior of the pharmaceutical suspension. (40 marks)

- 5.
- 5.1. List the factors that influence the cohesion of powders. (20 marks)
 - 5.2. Explain how cohesion of powders can be quantified using Jenike cell. (50 marks)
 - 5.3. How flow properties of powders can be improved? (30 marks)
- 6.
- 6.1. Explain how shelf-life of drugs is predicted using Arrhenius equations. (80 marks)
 - 6.2. List the 05 chemical degradation pathways leading to instability of drugs. (20 marks)
- 7.
- 7.1. Describe the structure and pharmaceutical uses of the cyclodextrins. (65 marks)
 - 7.2. How stoichiometric ratio of ligand to metal in complex can be determined using dielectric constant? (35 marks)
- 8.
- 8.1.
 - 8.1.1. List the different types of emulsifying agents. (15 marks)
 - 8.1.2. Discuss the factors that cause coalescence and breaking. (25 marks)
 - 8.2. Write note on biopharmaceutics classification system. (60 marks)