

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**BACHELOR OF PHARMACY**  
**SECOND YEAR SECOND SEMESTER EXAMINATION – MARCH 2014**  
**PHACE 2202 - PHARMACEUTICS III**  
**PART II**

**Date: 26.03.2014**

**Time:2 hours**

Answer all **EIGHT** questions.

- |   |       |   |            |
|---|-------|---|------------|
| 1 | 1.1   | What is colloid?  | (10 Marks) |
|   | 1.2   | Enumerate the properties of colloid.  | (30 Marks) |
|   | 1.3   | Describe different types of colloids.   | (60 Marks) |
| 2 | 2.1   | Define the term 'Rheology'  | (10 Marks) |
|   | 2.2   | Classify the non – Newtonian system and explain with graph.                             | (40 Marks) |
|   | 2.3   | Explain the following:  |            |
|   | 2.3.1 | Mechanism of shear thinning of a suspension.  | (25 Marks) |
|   | 2.3.2 | Rheological properties of ointment and cream.   | (25 Marks) |
| 3 | 3.1   | Define 'Solubility'.  | (10 Marks) |
|   | 3.2   | Describe factors that affect the solubility of drugs.                                   | (60 Marks) |
|   | 3.3   | Describe the mechanism of drug release from polymer matrix.                             | (30 Marks) |
| 4 |       | Write an account on:  |            |
|   | 4.1   | chelate.  | (50 Marks) |
|   | 4.2   | protein binding of drugs.   | (50 Marks) |
| 5 |       | Write an account on:  |            |
|   | 5.1   | prevention of oxidation of drugs.   | (35 Marks) |
|   | 5.2   | micellarsolubilization.   | (30 Marks) |
|   | 5.3   | application of photochemistry in pharmacy.  | (35 Marks) |
| 6 | 6.1   | What is micrometry?   | (10 Marks) |
|   | 6.2   | What are the properties of powder?  | (40 Marks) |
|   | 6.3   | Describe the use of powder in pharmaceutical products.                                  | (50 Marks) |
| 7 | 7.1   | Classify surfactants with examples  | (35 Marks) |
|   | 7.2   | List the methods that are used to determine the surface tension of a liquid             | (25 Marks) |
|   | 7.3   | Explain the pharmaceutical applications of surfactants.                                 | (40 Marks) |
| 8 | 8.1   | Briefly explain the methods used to enhance the stability of pharmaceutical suspension. | (50 Marks) |
|   | 8.2   | Describe various instabilities that occur in the emulsion.                              | (50 Marks) |