

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**BACHELOR OF PHARMACY**  
**SECOND YEAR SECOND SEMESTER EXAMINATION – AUGUST 2016**  
**PHACE 2202 PHARMACEUTICS III – PAPER II**

**Date: 10.08.2016.**

**Time: 02 Hours**

**Answer all eight questions**

1. Briefly describe the
  - 1.1 techniques used to enhance the solubilization of poorly soluble drugs. (50 Marks)
  - 1.2 pH partition principle for the drug transport through the biological membrane. (50 Marks)
  
2.
  - 2.1 List different types of colloids. (20 Marks)
  - 2.2 Explain how shape of colloidal particles affect the viscosity of dispersion. (30 Marks)
  - 2.3 Explain the application of colloids in pharmacy. (50 Marks)
  
3.
  - 3.1 Briefly explain how
    - 3.1.1 electrical properties affect the stability of suspension? (40 Marks)
    - 3.1.2 controlled flocculation is achieved in suspension. (30 Marks)
  - 3.2 Describe the structure of gel. (30 Marks)
  
4.
  - 4.1 Describe different types of rheological system with the help of rheogram. (45 Marks)
  - 4.2 Briefly explain the mechanism of shear thinning system. (30 Marks)
  - 4.3 Explain the effect of thixotropy on drug release from parenteral suspension of procaine penicillin G. (25 Marks)
  
5.
  - 5.1 What are Nernst and Zeta potentials? (20 Marks)
  - 5.2 Enumerate the uses of surfactants in pharmacy. (40 Marks)
  - 5.3 Briefly explain the
    - 5.3.1 wetting process (20 Marks)
    - 5.3.2 detergency process. (20 Marks)

- 6.
- 6.1 Describe the coulter current method for the particle size determination. (30 Marks)
  - 6.2 Explain the factors that influence on the cohesion of powders. (30 Marks)
  - 6.3 How can the flow property of powder be improved? (40 Marks)
- 7.
- 7.1 Enumerate the uses of metal ion complexes. (30 Marks)
  - 7.2 Write an account on
    - 7.2.1 structure and pharmaceutical applications of  $\beta$ -cyclodextrin. (40 Marks)
    - 7.2.2 significance of photochemistry in pharmacy. (30 Marks)
8. Write an account on
- 8.1 auto oxidation of drugs. (40 Marks)
  - 8.2 accelerated stability studies. (60 Marks)

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