



UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
SECOND YEAR SECOND SEMESTER EXAMINATION – FEBRUARY 2017
PHACE 2234 PHARMACEUTICS III

Date: 13.02.2017

Time: 02 Hours

ANSWER ALL EIGHT QUESTIONS.

1.
 - 1.1 Define “pharmaceutical dissolution”. (10 marks)
 - 1.2 Explain the
 - 1.2.1 process of dissolution of solids using Noyes whitney equation. (40 marks)
 - 1.2.2 factors that affect the dissolution rate of solids. (50 marks)
2.
 - 2.1 Classify and differentiate different types of colloids. (60 marks)
 - 2.2 Enumerate the pharmaceutical application of colloids. (40 marks)
3.
 - 3.1 Explain the effect of the following on the stability of suspension.
 - 3.1.1 Electrolytes (30 marks)
 - 3.1.2 Polymers. (25 marks)
 - 3.2
 - 3.2.1 Classify emulsifying agents. (15 marks)
 - 3.2.2 Explain how above mentioned emulsifying agents stabilize the emulsions? (30 marks)
4.
 - 4.1 List the types of rheological systems. (15 marks)
 - 4.2 Explain the mechanism of
 - 4.2.1 shear thickening system. (30 marks)
 - 4.2.2 thixotropy. (30 marks)
 - 4.3 Explain the importance of rheology in
 - 4.3.1 suspensions. (15 marks)
 - 4.3.2 ophthalmic solutions. (10 marks)

- 5.
- 5.1 What is the importance of interfacial phenomena in the development of pharmaceutical formulations? (20 marks)
 - 5.2 Classify surfactants with examples. (20 marks)
 - 5.3 Write an account on
 - 5.3.1 Hydrophilic Lipophilic Balance value of surfactants. (20 marks)
 - 5.3.2 application of surfactants in pharmaceutical formulations. (40 marks)
- 6.
- 6.1 Explain the methods that improve the flow property of powders? (30 marks)
 - 6.2 Briefly explain how drugs can be protected from
 - 6.2.1 hydrolysis. (40 marks)
 - 6.2.2 oxidation. (30 marks)
- 7.
- 7.1 Explain the influence of water/lipid solubility of drugs in the passive transport across biological membrane. (30 marks)
 - 7.2 Briefly describe the accelerated stability testing of drugs. (70 marks)
8. Write an account on
- 8.1 significance of protein-drug binding. (30 marks)
 - 8.2 structural features of gels. (30 marks)
 - 8.3 β -cyclodextrins. (40 marks)

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