



UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
SECOND YEAR SECOND SEMESTER EXAMINATION – April, 2020
PHACE 2234 PHARMACEUTICS III – PAPER II

Date: 23.09.2020

Time: 02 Hours

Answer All Eight Questions

1.

- 1.1 Define the term “Solution”? (10 marks)
- 1.2 Explain the mechanisms by which polar solvents solubilize polar substances. (45 marks)
- 1.3 Explain the methods that increase the dissolution rate of crystal form of orally administered solid drug? (45 marks)

2.

- 2.1 Differentiate colloidal and coarse dispersions. (30 marks)
- 2.2 What is hydrophobic dispersions? (10 marks)
- 2.3 Describe the different methods for the preparation of hydrophobic dispersions. (60 marks)

3.

- 3.1 Define the following.
 - 3.1.1 Thixotropy (10 marks)
 - 3.1.2 Newtonian systems (10 marks)
- 3.2 Explain the
 - 3.2.1 mechanism of thixotropy. (50 marks)
 - 3.2.2 role of thixotropy in the oral suspensions. (30 marks)

4.

- 4.1 Classify surfactants with one example for each. (20 marks)
- 4.2 Explain the
 - 4.2.1 applications of surfactants in different drug delivery systems. (40 marks)
 - 4.2.2 process of formation of micelles by surfactants. (40 marks)

5.

- 5.1 Explain the various ways that are used to express the equivalent spherical diameters of asymmetric particles. (30 marks)
- 5.2 Describe the different methods that can improve the flow property of powder. (40 marks)
- 5.3 The weight of a sodium iodide tablet was 0.345 g and the bulk volume was found to be 0.094 cm³. The true density of sodium iodide is 3.76 g/cm³. Calculate the bulk density and the total porosity of the tablet? (30 marks)



- 6.
- 6.1 List the applications of complexes in drug delivery systems. (20 marks)
- 6.2 Describe the method for accelerated stability testing of drugs. (80 marks)
- 7.
- 7.1 Explain how controlled flocculation can be brought about in suspensions? (30 marks)
- 7.2
- 7.2.1 List the three (03) different groups of emulsifying agents. (15 marks)
- 7.2.2 Briefly explain how emulsification brought about by emulsifying agents that are mention in 7.2.1? (55 marks)
8. Write an account on
- 8.1 biopharmaceutical classification system. (40 marks)
- 8.2 β -cyclodextrins. (60 marks)