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UNIVERSITY OF JAFFNA, SRI LANKA  
FACULTY OF ALLIED HEALTH SCIENCES  
FIRST YEAR SECOND SEMESTER EXAMINATION IN BPharmHons – 2022  
PHACE 1254 PHYSICAL PHARMACEUTICS

Date: 14.06.2024

Time: 03 Hours

Answer All Six Questions

1.
  - 1.1 Define the following.
    - 1.1.1 Semipolar solvents (10 Marks)
    - 1.1.2 Hydrotrophy (10 Marks)
    - 1.1.3 Dissolution (10 Marks)
    - 1.1.4 Solubility (10 Marks)
  - 1.2 Briefly explain the different factors that affect the dissolution rate of solids. (60 Marks)
2.
  - 2.1
    - 2.1.1 What is dispersion? (10 Marks)
    - 2.1.2 Classify the types of dispersion and differentiate in between them. (35 Marks)
  - 2.2 Write an account on the packing arrangement of particles. (55 Marks)
3.
  - 3.1 Give the pharmaceutical applications of
    - 3.1.1 surfactants (30 Marks)
    - 3.1.2  $\beta$  - Cyclodextrin (20 Marks)
  - 3.2 Describe the structural features of gel. (50 Marks)
4.
  - 4.1 What is thixotropy? (10 Marks)
  - 4.2 Explain the mechanism of thixotropy. (35 marks)
  - 4.3 Explain the importance of thixotropy in the
    - 4.3.1 parenteral suspension (15 Marks)
    - 4.3.2 oral suspension (15 Marks)
  - 4.4 List the different types of equipment used to measure the viscosity of liquids. (25 Marks)

5.

5.1

5.1.1 Define emulsion (10 Marks)

5.1.2 List the different types of emulsifying agents with an example for each. (15 Marks)

5.1.3 Explain how emulsifying agents stabilize the emulsions. (30 Marks)

5.2 Explain why flocculated particles stabilize the suspension more than deflocculated particles. (20 Marks)

5.3 Give the methods to prevent the photo degradation of drugs during storage. (25 Marks)

6.

6.1 Write the purpose of stability studies of drugs. (30 Marks)

6.2 Briefly describe the accelerated stability study of drugs. (70 Marks)