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**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FACULTY OF ALLIED HEALTH SCIENCES**  
**FIRST YEAR SECOND SEMESTER EXAMINATION IN BPharmHons – 2021**  
**PHACE 1254    PHYSICAL PHARMACEUTICS**

**Date: 19.06.2023**

**Time: 03 Hours**

**Answer All Six Questions**

1.
  - 1.1 Briefly explain the different methods used to improve the solubilization of poorly soluble drugs. (50 Marks)
  - 1.2 Describe pH partition principle for transport of drugs across the gastro intestinal membrane. (30 Marks)
  - 1.3 Write an account on Biopharmaceutical classification system (BCS). (20 Marks)
  
2.
  - 2.1
    - 2.1.1 What is thixotropy? (10 Marks)
    - 2.1.2 Briefly explain the importance of thixotropy in the
      - 2.1.2.1 oral suspension. (20 Marks)
      - 2.1.2.2 parenteral suspension. (20 Marks)
  - 2.2 Write the pharmaceutical uses of organic molecular complexes. (20 Marks)
  - 2.3 Give the limitations of accelerated stability study. (30 Marks)
  
3.
  - 3.1 Define colloidal dispersion. (10 marks)
  - 3.2 Classify colloidal dispersion. (15 marks)
  - 3.3 Differentiate type of colloidal dispersions mentioned in 3.2. (40 marks)
  - 3.4 Discuss the pharmaceutical applications of colloids. (35 marks)
  
4.
  - 4.1 What are surfactants? (05 Marks)
  - 4.2 Classify surfactants with one example for each. (10 Marks)
  - 4.3 Briefly discuss the pharmaceutical applications of adsorbents. (35 Marks)
  - 4.4 Explain the
    - 4.4.1 different methods used to improve the flow property of powder. (30 Marks)
    - 4.4.2 detergency process of detergents. (20 Marks)

5.

5.1 Define followings.

5.1.1 Flocculated suspension (05 Marks)

5.1.2 Deflocculated suspension (05 Marks)

5.1.3 Sedimentation volume (05 Marks)

5.1.4 Degree of sedimentation (05 Marks)

5.2 Differentiate flocculated and deflocculated suspensions. (35 Marks)

5.3 Explain how controlled flocculation achieved in a suspension. (45 Marks)

6.

6.1 Briefly explain how drugs protected from followings.

6.1.1 Hydrolytic decomposition (40 Marks)

6.1.2 Oxidative decomposition (20 Marks)

6.2

6.2.1 Define emulsion. (10 Marks)

6.2.2 Classify emulsifying agents with one example for each. (15 Marks)

6.2.3 Briefly Explain how emulsifying agents stabilize emulsion. (15 Marks)