

**Master of Pharmacy (Pharmaceutics)**  
**Second Semester Examination, June-2021**  
**Molecular Pharmaceutics (Nano Technology & Targeted DDS)**  
**[MPH201T]**

**Time: 3:00 Hrs**

**Max Marks 75**

**Note: (i) Attempt any five questions.**  
**(ii) All questions carry equal marks.**

- Q.1 Discuss concepts, events and biological process involved in drug targeting as per Targeted Drug Delivery Systems.
- Q.2 Write in detail about types, preparation and evaluation of Nano particles & liposomes.
- Q.3 Give a brief note on preparation and applications of niosomes.
- Q.4 Elaborate aerosols.
- Q.5 Give a note on liposomal gene delivery systems.
- Q.6 Explain tumor targeting and brain specific delivery.
- Q.7 Define containers. Give its types, preparation and evaluation.

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**Advanced Bio pharmaceutics & Pharmacokinetics [MPH202T]**

**Time: 3:00 Hrs**

**Max Marks 75**

**Note: Attempt any five questions. All questions carry equal marks.**

- Q.1 What do you mean by drug absorption? Explain the factors which affect drug absorption.
- Q.2 Give a note on pharmacokinetics and pharmacodynamics of Biotechnology drugs.
- Q.3 Write in detail about design and evaluation of bioequivalence studies.
- Q.4 Discuss about Cytochrome p450- based drug interactions.
- Q.5 Describe rate-limiting steps involved in drug absorption,
- Q.6 Explain Noyes–Whitney equation and drug dissolution.
- Q.7 Write in brief about Targeted Drug Delivery Systems and Biotechnological products.
- Q.8 Give clinical significance of bioequivalence studies.

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**Computer Aided Drug Delivery System [MPH203T]**

**Time: 3:00 Hrs**

**Max Marks 75**

**Note: Attempt any five questions. All questions carry equal marks.**

- Q.1 Explain statistical modeling in pharmaceutical research and Development.
- Q.2 Elaborate regulatory and industry views on QbD.
- Q.3 Write a brief note on computational modeling of drug disposition.
- Q.4 Give a note on computers in pharmaceutical formulation.
- Q.5 Write in detail about computer simulations in pharmacokinetics and pharmacodynamics.
- Q.6 Discuss computers in clinical development.
- Q.7 What do you mean by artificial intelligence? Explain pharmaceutical automation.
- Q.8 Describe concept of optimization, optimization parameters, factorial design, optimization technology & screening design.

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**Cosmetics and Cosmeceuticals [MPH204T]**

**Time: 3:00 Hrs**

**Max Marks 75**

**Note: (i) Attempt any five questions.**  
**(ii) All questions carry equal marks.**

- Q.1 What are the challenges in formulating herbal cosmetics?
- Q.2 Give a note on herbal ingredients used in hair care, skin care and oral care.
- Q.3 How will you classify Sunscreens? Write in detail about sun-protection and pigmentation.
- Q.4 Classify perfumes. Explain perfume ingredients listed as allergens in EU regulations.
- Q.5 Discuss common problems associated with oral cavity.
- Q.6 Describe regulatory provisions related to import of cosmetics.
- Q.7 Define Surfactants. Give its classification and applications.
- Q.8 Which factors affect microbial preservative efficacy? Explain all of them.