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Sub Code: BP704T

Paper Id: 231899

Roll No. 2010420509004

**B PHARM  
(SEM VII) THEORY EXAMINATION 2022-23  
NOVEL DRUG DELIVERY SYSTEM (NDDS)**

**Time: 3 Hours**

**Total Marks: 75**

**Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

1. **Attempt all questions in brief.** **10 x 2 = 20**
- (a) Define the term Microencapsulation and Microcapsules.
  - (b) Explain the functions of the various structural components of Liposomes.
  - (c) Mention the applications of Monoclonal antibodies on targeted drug delivery.
  - (d) Define the term 'permeation enhancers' with examples.
  - (e) Mention basic components of Transdermal drug delivery systems.
  - (f) Explain Spray drying/spray congealing method.
  - (g) Mention the advantages and disadvantages of Buccal drug delivery system.
  - (h) Define Niosomes and Nanoparticles.
  - (i) Define Hydrodynamic pressure activate DDS.
  - (j) Mention different factors affecting transmucosal permeability.

**SECTION B**

2. **Attempt any two parts of the following:** **2 x 10 = 20**
- (a) Explain the Different formulation approaches of Transdermal Drug Delivery Systems.
  - (b) Discuss implantable drug delivery system and explain in detail osmotic pump.
  - (c) Describe the various approaches for designing controlled release formulations.

**SECTION C**

3. **Attempt any five parts of the following:** **5 x 7 = 35**
- (a) Explain in brief the various methods to overcome ocular barriers for effective drug delivery.
  - (b) Discuss the Development and applications of IUDs in pharmaceutical drug delivery.
  - (c) Mention the various formulation approaches for gastro-retentive drug delivery systems. Discuss any one method.
  - (d) Define targeted drug delivery system and explain the various drug targeting approaches.
  - (e) Discuss briefly Nebulizer and Metered dose Inhalers.
  - (f) Define and classify polymers and explain applications of polymers.
  - (g) Explain the significance and limitations of naso-pulmonary drug delivery systems.