



**Roll No:**

**MPHARM**  
**(SEM I) THEORY EXAMINATION 2021-22**  
**DRUG DELIVERY SYSTEM**

**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.**

$$10 \times 2 = 20$$

- a. Give the limitations of buccal drug delivery systems.
  - b. Summarize the classification of rate controlled drug delivery systems.
  - c. Interpret the components in transdermal drug delivery systems.
  - d. Explain 'Telepharmacy' and 'Telemedicine'.
  - e. Summarize difference between Controlled release drug delivery systems and sustained release drug delivery systems.
  - f. Express advantages, disadvantages of Buccal drug delivery system.
  - g. Explain on Pharmacogenetics and Bioelectronic medicines.
  - h. Give limitations and applications of protein and peptides Drug Delivery.
  - i. ~~Explain on Pharmacogenetics and Bioelectronic medicines.~~
  - j. Outline the advantages of Gastro retentive drug delivery system.
9. Should we read a. . . classify polymers on functional basis

## SECTION B

2. Attempt any two parts of the following:

$$2 \times 10 = 20$$

- Express in detail different approaches used to develop Transdermal drug delivery system.
- Explain the different approaches for Effervescent Gastro Retentive Drug Delivery Systems.
- Demonstrate Feedback regulated drug delivery systems? Explain pH and Osmotic Pressure Activated drug delivery systems. <https://www.aktuonline.com>

## SECTION C

3. Attempt any five parts of the following:

 $7 \times 5 = 35$ 

- Explain the role of the various barriers of protein drug delivery and state how to overcome them.
- Explain the barriers of drug permeation in Ocular drug delivery systems and explain formulation approaches to Ocular drug delivery.
- Explore Formulation of Vaccine delivery systems and Describe Single shot vaccine.
- Discuss in detail classification of polymers and explain biodegradable and natural polymers.
- Express the Mechanism of drug permeation through Buccal drug delivery systems. Explain different theories of Muco adhesion drug delivery systems.
- Discuss the significance of 3D printing of pharmaceuticals.
- Explain in detail the evaluation of Transdermal drug delivery system.