PAPER ID-310612

Roll No:

BPHARM
(SEM VII) THEORY EXAMINATION 2025-26
NOVEL DRUG DELIVERY SYSTEM (NDDS) – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. 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 Controlled Drug Delivery System (CDDS).
b.	What is meant by zero-order drug release?
c.	Define bioadhesion and mucoadhesion.
d.	Write two advantages of microencapsulation
e.	Define permeation enhancer used in TDDS.
f.	What is gastro-retentive drug delivery systems (GRDDS)?
g.	Define targeted drug delivery system.
h.	What is an ocusert?
i.	Write two advantages of implantable drug delivery systems
j.	Define dry powder inhaler (DPI).

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Describe in detail the design approaches of controlled release formulations based on diffusion, dissolution and ion exchange principles.
b.	Explain Transdermal Drug Delivery Systems (TDDS) with permeation mechanism, components and formulation approaches.
c.	Write the development, advantages and disadvantages of intra-uterine devices.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Describe classification, properties and applications of polymers used in controlled release formulations.
b.	Explain the methods of microencapsulation and their pharmaceutical applications.
c.	Discuss the principles of mucoadhesion and formulation considerations of buccal drug delivery systems.
d.	Discuss the concept, advantages and disadvantages of implantable drug delivery systems.
e.	Explain the formulation and evaluation of nasal drug delivery systems.
f.	Describe the approaches of gastro-retentive drug delivery systems with applications.
g.	Explain the factors affecting drug permeation through skin in transdermal drug delivery systems.