



PAPER ID-411403

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MPHARM
(SEM I) THEORY EXAMINATION 2023-24
DRUG DELIVERY SYSTEM

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.	What are customized drug delivery systems?
b.	Discuss 3D printing of pharmaceuticals.
c.	Mention the principle of osmotic activated drug delivery systems.
d.	What is pH activated drug delivery system?
e.	Enlist advantages of Gastro-retentive drug delivery system.
f.	Mention names of two polymers used for mucoadhesion.
g.	What are the main anatomical barriers to drug delivery in the eye?
h.	What is the purpose of ocular inserts in drug delivery?
i.	Name two penetration enhancers.
j.	What are single shot vaccines?

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

a.	What is the basic principle behind gastro-retentive drug delivery systems? What are their main disadvantages or limitations?
b.	Explain various barriers to drug delivery through skin. What are the key considerations in formulating a transdermal drug delivery system?
c.	What are the key considerations in formulating delivery systems for proteins and peptides? What in vitro methods are used to evaluate the stability of protein and peptide formulations?

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

a.	What is Telepharmacy, and how does it function in modern healthcare systems?
b.	Explain various approaches to overcome barriers to ocular drug delivery.
c.	Discuss mechanism of feedback regulated drug delivery system along with examples.
d.	Write a note on transdermal delivery of vaccines.
e.	Explain mechanisms of drug delivery from SR/CR formulations.
f.	What methods are used to evaluate the efficacy of transdermal drug delivery systems?
g.	Write a note on uptake of antigens by the immune system.