PAPER ID-421635

Subject Code: MPH102T

Roll No: | | | | | | | | | | | | | |

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

Time: 3 Hours ***Total 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.	Differentiate between sustained release and controlled release formulations.
b.	State the categories of patients for personalized medicines.
c.	Mention the categories of rate controlled drug delivery systems.
d.	State the working principle of pH activated drug delivery systems.
e.	Mention the limitations of gastro-retentive drug delivery systems.
f.	State the principle of mucoadhesion.
g.	Name the target diseases for ocular drug delivery.
h.	Name 2 important penetration enhancers used in the formulation of transdermal drug delivery systems.
i.	Name the barriers for protein delivery.
j.	Define single shot vaccines with example.

SECTION B

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

a.	Explain the principles and fundamentals of feedback regulated drug delivery systems.
b.	Describe the formulation approaches and evaluation parameters used for gastro-retentive drug delivery systems.
c.	Describe the barriers of drug permeation through eye and the formulation approaches to be undertaken to overcome the barriers.

SECTION C

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

a.	Explain the current status and applications of 3D printing in the pharmaceutical field.
b.	Write down the working principle and applications of enzyme activated drug delivery systems with suitable examples.
c.	Write down the advantages, disadvantages, and mechanism of drug permeation for buccal drug delivery systems.
d.	With the help of a neat schematic diagram of human eye, explain the routes of administration of various ocular drug delivery systems.
e.	Describe the various types of transdermal patches with diagram and explain their mechanisms of action.
f.	Explain the working principle of Telepharmacy.
g.	Describe the path of uptake of antigens with a neat schematic diagram and state the applications of transdermal vaccines.