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B PHARM
(SEM VII) THEORY EXAMINATION 2021-22
NOVEL DRUG DELIVERY SYSTEMS (NDDS)

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.	State two major physicochemical properties of drugs relevant to controlled release formulations.
b.	Mention the role of polymers in formulation of controlled release drug delivery systems.
c.	State the principles of bioadhesion.
d.	Name the factors affecting transmucosal permeability.
e.	State the working principles of various permeation enhancers.
f.	Define metered dose inhalers.
g.	State the functions of the various structural components of liposomes.
h.	Mention the applications of monoclonal antibodies on targeted drug delivery.
i.	Name the intra ocular barriers to ophthalmic drug delivery.
j.	State the limitations of the use of IUDs.

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

a.	Describe the various approaches for designing controlled release formulations with suitable examples.
b.	Describe the working principles and applications of implants and osmotic pump.
c.	Explain the formulation approaches of Transdermal Drug Delivery Systems to overcome the barrier effects of skin.

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

a.	Classify polymers on functional basis.
b.	Write a brief note on transmucosal permeability and formulation considerations for buccal drug delivery systems.
c.	Describe the formulation approaches for gastro-retentive drug delivery systems.
d.	Explain the various drug targeting approaches.
e.	State and explain the significance and limitations of naso-pulmonary drug delivery systems.
f.	Explain in brief the various methods to overcome ocular barriers for effective drug delivery.
g.	Write a brief note on the development and applications of intra uterine devices (IUDs).