



PAPER ID-411560

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MPHARM
(SEM II) THEORY EXAMINATION 2023-24
MOLECULAR PHARMACEUTICS (NANO TECH & TARGETED DDS)
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 and classify targeted drug delivery.
b.	Explain the structural components of Liposomes with examples.
c.	Define propellant with examples.
d.	Define Gene expression.
e.	Define Electrosome and Phytosomes.
f.	How blood-brain barrier plays a major role in brain targeting.
g.	Describe the mechanism of nasal absorption.
h.	Discuss hybridoma technology.
i.	Write a note on aptamers.
j.	State dry powder inhaler.

SECTION B

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

a.	Explain ex-vivo and in-vivo gene therapy.
b.	Explain the different approaches for Tumor targeting.
c.	Explain different methods for the preparation and evaluation of Nanoparticles.

SECTION C

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

a.	Explain the Preparation and application of Monoclonal antibodies.
b.	Discuss different methods used for the Development of Liposomes.
c.	Explain in brief with examples the role of receptors and ligands in targeted drug delivery.
d.	Explain the approaches for brain targeting.
e.	Elaborate the preparation of microcapsules by the Air suspension technique and Coacervation phase separation.
f.	Explain various types of formulations available for Nasal route drug delivery system.
g.	Explain the formulation and evaluation of aerosols.