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M PHARM
(SEMII) THEORY EXAMINATION 2022-23
MOLECULAR PHARMACEUTICS (NANO TECHNOLOGY & TARGETED DDS)

Time: 3 Hours**Total Marks: 75****Note:** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.**10 x 2 = 20**

- (a) Classify targeted drug delivery.
- (b) Define DPI and MDI.
- (c) Differentiate between niosomes and liposomes
- (d) Define microspheres. What are the various types of microspheres.
- (e) Discuss hybridoma technology.
- (f) Explain the propellant with examples.
- (g) Define Gene expression.
- (h) Define MAD (Mucosal Atomization Device).
- (i) Define Electrosome and Phytosomes.
- (j) Write the challenges of Gene therapy.

SECTION B

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

- (a) Discuss different formulation methods and evaluation of nanoparticles.
- (b) Explain ex-vivo & in-vivo gene therapy. Write in detail about the concepts of Gene therapy.
- (c) Explain the different approaches for Tumor targeting.

SECTION C

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

- (a) Discuss different methods used for the preparation of Liposomes.
- (b) Illustrate the development and application of Monoclonal antibodies.
- (c) Explore a note on aptamer-based drug delivery system and write its application.
- (d) Describe Air suspension and Spray drying methods for microencapsulation.
- (e) Explain in brief with examples the role of receptors and ligands in targeted drug delivery.
- (f) Explain different approaches for Brain targeting.
- (g) Explain the formulation and evaluation of Aerosols.