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DBW-MPH-201-T Seat No. _____

M. Pharm. (Sem. II) Examination

July - 2022

MPH-201T : Molecular Pharmaceutics (Nano Tech & Targeted DDS)

Time : **3** Hours] [Total Marks : **75**

Instruction : Figure to the right indicates marks.

1 Answer the following questions : **10×2=20**

(a) Define liposomes. What do you mean by SUV and MUV ?

(b) Give the drug selection criteria for pulmonary drug delivery system.

(c) What is Boyle's Law ?

(d) Give the name of Absorption enhancer for Nasal DDS along with its mechanism.

(e) What do you mean by ligand mediated drug targeting ?

(f) Give the examples of marketed formulations containing Microspheres.

(g) Differentiate Phytosomes and Liposomes.

(h) Give the rational of Nasal Drug delivery system.

(i) Explain : Capillary Aerosol Generator.

(j) Differentiate *in vivo* and *ex vivo* Gene Delivery Systems.

2 Answer the following questions : (Any **Two**) **2×10=20**

(a) Define targeted drug delivery system and discuss in detail about the various approaches for brain targeted drug delivery system.

(b) Briefly introduce the term nanotechnology and explain in detail about types, preparation, characterization and evaluation on Nanoparticles.

(c) Explain in detail about the anatomy, formulation and evaluation for pulmonary drug delivery system.

3 Answer any 7 out of the following : **7×5=35**

(a) Explain in detail about various factors affecting particle deposition in the lung.

(b) Write a detail note on Microsphere.

(c) Explain in brief about the application of monoclonal antibodies.

(d) Explain in brief about various factors affecting nasal absorption along with the approaches for enhancement the absorption of drugs.

(e) Explain in detail about various methods for preparation of liposomes along with its evaluation parameters.

(f) Define tumor. Explain in detail about various drug delivery system for tumor targeting.

(g) Give a brief idea about gene therapy.

(h) Write a brief note on Liposomal gene delivery systems.

(i) Brief note on Niosomes.
