

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MPHARM
BRANCH: PHARMACY

SEMESTER: 2nd
SESSION: SP 2025

SUBJECT: MPH201T MOLECULAR PHARMACEUTICS

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
5. Answer any five questions.

- 1a. Broadly discuss the rationale for site specific delivery. [7]
1b. Elaborately discuss the different types of targeting. [8]
- 2a. Discuss the methods for preparation of nanoparticles and along with their evaluation parameters. [7]
2b. Discuss the formulation and evaluation of Liposome as an effective drug delivery carrier. [8]
- 3a. Elaborate out the following: [7]
 i. Receptor Expression Profile
 ii. Receptor Topography
3b. Elaborate on Stimuli Sensitive drug delivery systems and Biodegradable Polymers [8]
- 4a. Elaborately discuss the Blood brain barrier and its importance. [7]
4b. Write short notes on the following: [4X2=8]
 i. Nanoemulsion
 ii. Nanofibers
 iii. Prodrugs
 iv. Phytosomes & Aquasomes
- 5a. Discuss the significance of aptamer in special reference to diagnostic and therapeutic potential. [7]
5b. Discuss the antisense mechanism utilized for prevention of any disease. [8]
- 6a. Discuss the preparation and characterization of niosomes. [7]
6b. Discuss the viral and non-viral vectors in detail [8]
- 7a. Discuss the hybridoma technology in detail and also discuss significance of monoclonal antibodies [7]
7b. Discuss the various aspects of gene therapy in detail. [8]

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