

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

CLASS: MPHARM
BRANCH: PHARMACY

SEMESTER: 2nd
SESSION: SP 2023

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.
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| 1a. | Discuss the different types of active drug targeting | [7][CO1] |
| 1b. | Discuss about four different principle requirements for a successful targeted delivery system. Discuss the factors determining the availability of drugs at the target site in details | [2+6=8][CO1] |
| 2a. | Discuss the basic components of a ligand targeted drug delivery system. Write about the receptor competition in LTD | [7][CO1] |
| 2b. | Provide a background for the following:
i. Receptor topography in LTD
ii. Receptor expression profile | [8][CO1] |
| 3a. | Discuss about the strategies for targeted brain delivery. | [7][CO1] |
| 3b. | Write short notes on the following:
i. Preparation of microcapsules
ii. Evaluation of Liposomes | [8][CO1] |
| 4a. | Discuss the preparation and evaluation of nanoparticles | [7][CO1] |
| 4b. | Discuss the preparation of niosomes | [8][CO1] |
| 5a. | Discuss in short viral and non-viral modes of gene delivery? | [7][CO3] |
| 5b. | Elaborate pharmacokinetic and biodistribution aspects of interfering RNAs | [8][CO3] |
| 6a. | Describe liposomes as versatile carrier for gene delivery. | [7][CO3] |
| 6b. | Discuss principle mechanism of respiratory deposition | [8][CO2] |
| 7a. | Elaborate advantages and disadvantages of PDDS. | [7][CO2] |
| 7b. | Write in short on components of aerosols | [8][CO2] |

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