

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

CLASS: M. PHARM
BRANCH: PHARMACY

SEMESTER : I
SESSION : MO/2022

SUBJECT: MPH102T DRUG DELIVERY SYSTEMS

TIME: 3:00 Hours

FULL MARKS: 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 factors affecting mucoadhesion in oral cavity. [7]
1b. Summarize the various approaches to intragastric floating drug delivery systems. [8]
- 2a. Briefly discuss the stimuli sensitive systems [7]
2b. Discuss the methods to increase drug delivery through buccal route. Also discuss the mechanism of permeation enhancers [8]
- 3a. Discuss in detail the fundamentals of Matrix-Membrane Hybrid systems and Microdissolution controlled delivery [7]
3b. i. Discuss the effects of Polymer solubility on controlled release drug delivery. Discuss the magnetic activated drug delivery systems [8]
ii. Write a short note on Bioresponsive and Bioerosion regulated delivery system with examples
iii.
iv.
- 4a. Discuss the factors affecting the design of oral sustained release dosage form. [7]
4b. Discuss the following delivery systems with proper equations wherever required: [8]
i. Osmotic Delivery system for Solids and Liquid formulations
ii. Hydrodynamic delivery system and Vapour Pressure Activated systems
- 5a. Discuss in detail challenges in ocular drug delivery. [7]
5b. Elaborate on absorption process of topical and transdermal and discuss about components of transdermal drug delivery. [8]
- 6a. Discuss formulation consideration of protein based drug delivery systems. [7]
6b. Summarize type of vaccines and mechanism of action of vaccines. [8]
- 7a. Discuss different types of transdermal delivery systems. [7]
7b. Detail about formulation aspects of ocular delivery systems. [8]

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