

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

**CLASS: MPHARM
BRANCH: PHARMACY**

**SEMESTER: 1st
SESSION: MO/23**

SUBJECT: MPH102T DRUG DELIVERY SYSTEM

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 in details Stimuli Sensitive Drug Delivery systems | [7] |
| 1b. | Discuss the Microreservior Dissolution Controlled systems and Osmotic controlled systems | [8] |
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| 2a. | Discuss the factors affecting GRDDS | [7] |
| 2b. | Discuss the different strategies for fabricating GRDDS | [8] |
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| 3a. | Discuss the physicochemical parameters & pharmacokinetic parameters for design of sustained delivery systems. Write a note on Hydrocolloid systems under sustained delivery. | [7] |
| 3b. | Write short notes on: | [8] |
| | i. Hydrodynamic Pressure activated systems | |
| | ii. Vapour Pressure Activated Drug delivery | |
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| 4a. | Discuss the physiology of buccal mucosa. Discuss theories of Bioadhesion | [7] |
| 4b. | Discuss the barriers to oral permeation. What are the methods to increase drug delivery via buccal route? How do Permeation enhancers act for buccal delivery? | [8] |
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| 5a. | Discuss in detail challenges in ocular drug delivery. | [7] |
| 5b. | Discuss mode of permeation of transdermal delivery systems and write in short about gradient controlled TDDS. | [8] |
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| 6a. | Discuss formulation consideration of protein-based drug delivery systems. | [7] |
| 6b. | Summarize type of vaccines and mechanism of action of any one type of covid vaccines. | [8] |
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| 7a. | Discuss anatomy and physiology of ocular barriers with diagrammatic representation. | [7] |
| 7b. | Discuss types of barriers limiting success of protein and peptide based delivery system. | [8] |

:22/11/2023:E