

**QP CODE: 112327**

**Reg. No:.....**

**First Semester M.Pharm Degree Supplementary Examinations  
August 2024**

**M.Pharm (Pharmaceutics)**

**Paper II – Drug Delivery Systems (MPH 102T)**

**(Common for 2017 and 2019 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays**

**(3x10=30)**

1. Explain 3D printing technology in pharmaceutical drug delivery with their applications
2. Discuss in detail about the principles, concepts, advantages and disadvantages of gastro retentive drug delivery systems.
3. Explain mucosal delivery of vaccines in detail.

**Short Notes**

**(9x5=45)**

4. Summarize feedback regulated drug delivery system.
5. Role of penetration enhancers in transdermal drug delivery system.
6. Explain Franz diffusion cell.
7. Distinguish sustained and controlled release drug delivery system.
8. Explain the formulation of protein drug delivery system.
9. What are the evaluation parameters of buccal drug delivery systems.
10. Discuss about pharmacogenetics.
11. Explain the principle of rate controlled drug delivery system.
12. Barriers of drug permeation for ocular drug delivery systems.

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