

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – VII EXAMINATION – WINTER-2025

Subject Code: BP704TT

Date:19-11-2025

Subject Name: Novel Drug Delivery System

Time:10:30 AM TO 01:30 PM

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|---|-----------|
| Q.1 | (a) | Enlist different types of controlled drug delivery system. Discuss Diffusion controlled mechanism in detail | 06 |
| | (b) | Write a note on naso pulmonary drug delivery system. | 05 |
| | (c) | Give the structure of skin. Describe basic components of TDDS. | 05 |
| Q.2 | (a) | Define following terms ER, SR, CR and MR. Write the advantages and disadvantages of controlled drug delivery. | 06 |
| | (b) | List out different types of nanoparticles. Write applications of nanoparticles. | 05 |
| | (c) | Explain evaluation test to determine muco adhesion strength. | 05 |
| Q.3 | (a) | Discuss various implantable osmotic pumps. | 06 |
| | (b) | Discuss the ocuserts with neat sketch. | 05 |
| | (c) | Write the applications of polymers in controlled release system with examples. | 05 |
| Q.4 | (a) | Write note on formulation of buccal drug delivery system. | 06 |
| | (b) | Define microencapsulation. Explain phase separation – coacervation technique. | 05 |
| | (c) | Write short note on dry powder inhaler (DPI). | 05 |
| Q.5 | (a) | Discuss factors affecting controlled drug delivery system. | 06 |
| | (b) | Classify liposomes and write differences between liposomes and niosomes. | 05 |
| | (c) | Write a brief note on the development of intra uterine devices (IUDs). | 05 |
| Q. 6 | (a) | What are biodegradable polymers? Give the differences between biodegradable and non-biodegradable polymers. | 06 |
| | (b) | Write the role of monoclonal antibodies in drug targeting. | 05 |
| | (c) | Discuss methods to overcome intra ocular barriers. | 05 |
| Q.7 | (a) | Enlist the approaches to prolong the gastric residence time. Explain floating drug delivery in detail. | 06 |
| | (b) | Differentiate microsphere and microcapsule. Write the merits of microspheres. | 05 |
| | (c) | Describe evaluation tests for transdermal patch in detail. | 05 |
