

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM. - SEMESTER- VII • EXAMINATION – WINTER -2022

Subject Code:BP704TT**Date:29/12/2022****Subject Name: Novel Drug Delivery System****Time: 10:30am to 01:30pm****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) | Write a note on dissolution and diffusion-controlled release system. | 06 |
| | (b) | Explain biological factors affecting the design of oral sustained release drug delivery system. | 05 |
| | (c) | Define loading and maintenance dose and show its calculation to prepare sustained release formulations | 05 |
| Q.2 | (a) | Explain principles of bioadhesion. How to determine bioadhesive strength? | 06 |
| | (b) | Enlist methods of microencapsulation and discuss any one method in detail. | 05 |
| | (c) | Classify implantable drug delivery and write in detail about osmotic pump. | 05 |
| Q.3 | (a) | Write in detail about MDI and DPI. | 06 |
| | (b) | Discuss the various approaches for floating drug delivery systems. | 05 |
| | (c) | Explain in detail, evaluation parameters of transdermal patch. | 05 |
| Q.4 | (a) | Discuss method of preparation of nanoparticles. | 06 |
| | (b) | Discuss applications of targeted drug delivery system in brief. | 05 |
| | (c) | Justify: MoAbs are targeted delivery systems. | 05 |
| Q.5 | (a) | Describe limitations of conventional Occular dosage forms. Explain modern approaches for the Occular drug delivery. | 06 |
| | (b) | Discuss merits, demerits and application of Intra uterine devices (IUDs). | 05 |
| | (c) | What is ophthalmic in situ gel? Describe different type of ocular inserts. | 05 |
| Q. 6 | (a) | Explain non erodible and erodible control release system. | 06 |
| | (b) | Differentiate Polymer Membrane Permeation and Polymer Matrix Diffusion Controlled Drug Delivery. | 05 |
| | (c) | Write a short note on microspheres. | 05 |
| Q.7 | (a) | Write in detail about concept of implant with example. | 06 |
| | (b) | Explain the mechanism of particle deposition in pulmonary airway. | 05 |
| | (c) | Discuss Penetration enhancer in TDDS. | 05 |
