

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER-7 EXAMINATION – WINTER -2023**

**Subject Code: BP704TT****Date: 08/12/2023****Subject Name: Novel Drug Delivery System****Time: 10.30 a.m. to 1.30 p.m.****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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|------------|-----|---|-----------|
| <b>Q.1</b> | (a) | Briefly explain Delayed Release. Explain various conditions, where delayed release is beneficial. | <b>06</b> |
|            | (b) | Explain diffusion controlled drug delivery systems along with polymers.                           | <b>05</b> |
|            | (c) | Classify polymers in detail with examples.  | <b>05</b> |
| <b>Q.2</b> | (a) | Enumerate different microencapsulation techniques. Explain multiorifice centrifugation method.    | <b>06</b> |
|            | (b) | Explain in detail theories of muco-adhesion.  | <b>05</b> |
|            | (c) | Define implantable drug delivery system. Explain its advantages and disadvantages.                | <b>05</b> |
| <b>Q.3</b> | (a) | Explain in detail osmotic pump with diagram.  | <b>06</b> |
|            | (b) | Explain different factors affecting skin permeation.  | <b>05</b> |
|            | (c) | Define Gastro Retentive Drug Delivery System. Give its advantages and disadvantages.              | <b>05</b> |
| <b>Q.4</b> | (a) | Explain various approaches for floating drug delivery.  | <b>06</b> |
|            | (b) | Explain DPI in detail.  | <b>05</b> |
|            | (c) | Explain Nasal Drug Delivery System.   | <b>05</b> |
| <b>Q.5</b> | (a) | Explain structure of liposome along with the materials used.                                      | <b>06</b> |
|            | (b) | Write in detail applications of nanoparticles.  | <b>05</b> |
|            | (c) | Differentiate nasal spray and nebulizers.   | <b>05</b> |
| <b>Q.6</b> | (a) | Enumerate different ocular products. Explain in detail medicated lenses.                          | <b>06</b> |
|            | (b) | Define intra uterine devices. Explain its applications.   | <b>05</b> |
|            | (c) | Explain evaluation parameters of niosomes.  | <b>05</b> |
| <b>Q.7</b> | (a) | Explain components of Transdermal Patch along with materials used in it.                          | <b>06</b> |
|            | (b) | Explain advantages, disadvantages and applications of Buccal Drug Delivery System.                | <b>05</b> |
|            | (c) | What is Lipinski's Rule of Five? Explain any three methods to enhance drug permeability.          | <b>05</b> |

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