

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 8 EXAMINATION – SUMMER-2025

Subject Code: BP814TT

Date: 14-05-2025

Subject Name: Pharmaceutical Product Development

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) | Write a note on Preformulation Studies. | 06 |
| | (b) | Give manufacturing and quality control testing of different type of Dosage form. | 05 |
| | (c) | Classify types of excipients used in tablet and capsules. | 05 |
| Q.2 | (a) | Write a note on placket-burman screening design with suitable examples. | 06 |
| | (b) | Write a note on factorial design. | 05 |
| | (c) | Discuss cyclodextrins and its application in product development | 05 |
| Q.3 | (a) | Write a note on excipients used for formulation of NDDS. | 06 |
| | (b) | Describe various quality control testing of packaging materials for pharmaceutical products | 05 |
| | (c) | Write a note on QbD and its application. | 05 |
| Q.4 | (a) | Discuss ideal requirements of excipients used for Aerosol. Explain in brief about Propellant. | 06 |
| | (b) | What is IPQC? Explain its importance with suitable example of a dosage form. | 05 |
| | (c) | Enumerate different types of disintegrant. Discuss in brief about Super disintegrant.. | 05 |
| Q.5 | (a) | Discuss different excipients used in Parenteral Formulation. | 06 |
| | (b) | Enlist different type of coating. Explain in detail enteric coating. | 05 |
| | (c) | Describe role of various excipients used in semi solid dosage form. | 05 |
| Q. 6 | (a) | Write a note on Non-ionic surfactant and their applications. | 06 |
| | (b) | Write in detail about the regulatory considerations for development of a pharmaceutical pack. | 05 |
| | (c) | Explain in brief Emulsifying agent. | 05 |
| Q.7 | (a) | Describe applications of polyethylene glycols and Sorbitol's in pharmaceutical dosage forms. | 06 |
| | (b) | Write a note on Simplex lattice design and its application. | 05 |
| | (c) | Write a note on Directly compressible excipients. | 05 |
