

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2015

Subject Code: 910102

Date: 21-05-2015

Subject Name: Pharmaceutical Formulation

Development and Biopharmaceutics

Time: 02:30 pm - 05:30 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) | Discuss compaction properties and its importance. | 06 |
| | (b) | Discuss particle size and particle size distribution in pre-formulation study. | 05 |
| | (c) | Give rationale for selecting the preferred polymorph. | 05 |
| Q.2 | (a) | Discuss drug-excipient compatibility study and methods of its determination. | 06 |
| | (b) | Discuss selection of dissolution medium and conditions. | 05 |
| | (c) | Write Winsor's theory of solubilization. | 05 |
| Q.3 | (a) | Enumerate techniques for improvement in drug solubilization and discuss any one in details. | 06 |
| | (b) | Discuss importance of accelerated stability study. | 05 |
| | (c) | Discuss objectives of dissolution study and dissolution equipment for floating tablets. | 05 |
| Q.4 | (a) | Give applications of microcalorimetry in stability study. | 06 |
| | (b) | Discuss method of studying bioavailability and bioequivalence. | 05 |
| | (c) | Discuss the general regulatory requirements of stability testing. | 05 |
| Q.5 | (a) | Discuss similarity and dissimilarity factors with examples. | 06 |
| | (b) | Discuss importance of volume of distribution and plasma protein binding. | 05 |
| | (c) | How shampoo is evaluated? | 05 |
| Q. 6 | (a) | Discuss basic concept and importance of biological half-life. | 06 |
| | (b) | Give importance of cancer cell lines as in vitro models in cancer. | 05 |
| | (c) | Give bioequivalence study requirements. | 05 |
| Q.7 | (a) | Discuss kinetics of two compartment model. | 06 |
| | (b) | Discuss factors affecting IVIVC. | 05 |
| | (c) | Write note on herbal products for face. | 05 |
