

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM – SEMESTER -1 - EXAMINATION –WINTER - 2018

Subject Code: MPT103T**Date: 05/01/2019****Subject Name: Pharmaceutical formulation and 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) Explain significance of drug excipients incompatibility in preformulation study. | 06 |
| | (b) What is preformulation study? Discuss the significance of particle size and shape in formulation. | 05 |
| | (c) Write a note on hygroscopicity and crystallinity. | 05 |
| Q.2 | (a) Write a short note on DSC. | 06 |
| | (b) Discuss importance of FTIR in preformulation study | 05 |
| | (c) Write a short note on X-Ray diffraction. | 05 |
| Q.3 | (a) How dissolution data are compared? Describe dissolution profile comparison based on f1 and f2. | 06 |
| | (b) Discuss importance and objectives of Dissolution studies. | 05 |
| | (c) Write a short note on BCS classification. | 05 |
| Q.4 | (a) Enlist techniques used for solubility improvement. Discuss solid dispersion in detail. | 06 |
| | (b) Define Solubility. Describe factors affecting on solubility. | 05 |
| | (c) Discuss about selection of dissolution media and conditions | 05 |
| Q.5 | (a) Write a short note on basic concepts and objectives of stability study | 06 |
| | (b) Write a short note on accelerated stability study | 05 |
| | (c) Discuss mechanisms of solubilization. | 05 |
| Q. 6 | (a) Discuss various factors affecting on stability of Pharmaceutical formulations | 06 |
| | (b) Discuss regulatory requirements for climate zone in stability study. | 05 |
| | (c) Write a note on applications of biomaterials in pharmaceutical formulations. | 05 |
| Q.7 | (a) Write a short note on cyclodextrins. | 06 |
| | (b) Discuss factors affecting for the selection of excipients in pharmaceutical formulations. | 05 |
| | (c) Write a short note on film coating polymers | 05 |
