

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 3- EXAMINATION –WINTER - 2018

Subject Code: 230002

Date: 06/12/2018

Subject Name: Pharmaceutical Engineering - II

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) | Define content uniformity. Discuss its importance in pharmaceutical dosage forms. | 06 |
| | (b) | Describe factors affecting achieving content uniformity. | 05 |
| | (c) | Discuss error occur in control chart. | 05 |
| Q.2 | (a) | Enumerate different types of charts. Explain any one in details. | 06 |
| | (b) | Write a note on elements of control charts. | 05 |
| | (c) | Write a note on requirements of regulatory agencies (FDA, USP and EP) for content uniformity. | 05 |
| Q.3 | (a) | What is importance of powder flow? Discuss factor influencing on powder flow. | 06 |
| | (b) | Explain the various methods for measurement of angle of repose. | 05 |
| | (c) | What are the pharmacopoeial specifications for Carr's index, Hausner's ratio and angle of repose? | 05 |
| Q.4 | (a) | Discuss factors affecting pellet properties. | 06 |
| | (b) | Enlist methods of extrusion. Write a note on Hot Melt Extrusion. | 05 |
| | (c) | Explain spheronization. Discuss in brief stages involved in spheronization process. | 05 |
| Q.5 | (a) | Write a note on SAS technology. | 06 |
| | (b) | Draw and explain phase diagram shows supercritical region with examples. | 05 |
| | (c) | What are the advantages and limitations of Carbon dioxide as SCF? | 05 |
| Q. 6 | (a) | What are pellets? Write their pharmaceutical application and properties. | 06 |
| | (b) | Differentiate inclusion complex and solid dispersion. | 05 |
| | (c) | Describe the role of microcrystalline cellulose in pelletization. | 05 |
| Q.7 | (a) | Explain the application of supercritical fluid in pharmacy. | 06 |
| | (b) | Explain various processes and equipments used in supercritical fluid application. | 05 |
| | (c) | Write a note on Rapid Expansion of Supercritical Solution (RESS) technique. | 05 |
