

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.

- 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**
