

GUJARAT TECHNOLOGICAL UNIVERSITY
B. PHARM. - SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: 230002**Date: 28/12/2012****Subject Name: Pharmaceutical Engineering - II****Time: 10.30 am - 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. Give the requirements of content uniformity as per pharmacopoeia. 06
- (b) Write a note on sampling techniques used in determination of content uniformity. 05
- (c) Define Carr's Index and Hausner Ratio. Explain its significance in powder flow and compressibility. 05
- Q.2** (a) Explain the factors affecting powder and granule flow. 06
- (b) Describe the importance of powder flow in pharmacy. 05
- (c) Write a note on angle of repose. 05
- Q.3** (a) What are control charts? Give the importance of control charts in pharmacy. 06
- (b) Explain components of control charts. 05
- (c) Briefly explain types of control charts. 05
- Q.4** (a) Define extrusion and pelletization. Classify various types of machines used for extrusion process technology. 06
- (b) Write a note on screw extruders. 05
- (c) Give the applications of extrusion in pharmacy. 05
- Q.5** (a) Define supercritical fluids. Describe the application of supercritical fluids in size reduction. 06
- (b) Describe the process of preparing solid dispersion using supercritical fluids. 05
- (c) Enlist supercritical fluids. Enumerate basic techniques in supercritical fluid technology and explain any one in detail. 05
- Q.6** (a) What is Eudragit? Discuss the use of Eudragit in Pelletization. 06
- (b) Write a note on melt extrusion. 05
- (c) Explain the use of polyethylene oxide in extrusion. 05
- Q.7** (a) Write a note on use of MCC in pelletization. 06
- (b) Explain rat holing and arching. Discuss its causes and remedies. 05
- (c) Define and differentiate Lubricants and Glidants giving examples. 05
