Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharm SEMESTER–III • EXAMINATION – SUMMER - 2016

Subject Code: 230002 **Date: 06/05/2016**

Subject Name: Pharmaceutical Engineering -II

Time: 2:30 PM to 5:30 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)**	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)	Describe Scott Volumeter method for determination of bulk density.	**05**
Q.2	**(a)**	Define content Uniformity. Discuss its importance in pharmaceutical dosage forms	**06**
	(b)	Describe factors affecting achieving content uniformity	**05**
	(c)	Discuss errors occur in control chart.	**05**
Q.3	**(a)**	Enlist types of control charts and explain in brief each.	**06**
	(b)	How are the upper and lower limits of control chart calculated?	**05**
	(c)	What are the pharmacopoeial specifications for Carr's index, Hausner's ratio and angle repose?	**05**
Q.4	**(a)**	Explain spheronization. Discuss in brief stages involved in spheronization process.	**06**
	(b)	Enlist methods of extrusion. Write a note on Hot Melt Extrusion	**05**
	(c)	Discuss factors affecting pellet properties.	**05**
Q.5	**(a)**	Draw and Explain phase diagram shows supercritical region with examples.	**06**
	(b)	Write a note on polymers used in hot melt extrusion spheronization.	**05**
	(c)	Explain the application of supercritical fluid in pharmacy.	**05**
Q.6	**(a)**	Differentiate mass uniformity and content uniformity. Explain mass uniformity test in detail.	**06**
	(b)	Describe the role of microcrystalline cellulose in Pelletization.	**05**
	(c)	Write a short note on SAS technology.	**05**
Q.7	**(a)**	What are pellets? Write their pharmaceutical applications and properties	**06**
	(b)	Compare and contrast: Uniformity of dosage as per IP and USP.	**05**
	(c)	Differentiate inclusion complex and solid dispersion.	**05**

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