

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 3 EXAMINATION – SUMMER -2019

Subject Code: 230002

Date: 01-06-2019

Subject Name: Pharmaceutical Engineering - II

Time: 02:30 PM TO 05:30 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 flow properties. Discuss about importance of powder flow in pharmaceuticals	06
	(b)	Explain Carr's Index / Compressibility index and give the pharmacopoeial specifications for it.	05
	(c)	Discuss on methods used for measurement of Angle of repose.	05
Q.2	(a)	Discuss about uses of various excipients in different pelletization technique.	06
	(b)	Discuss techniques to improve powder flow.	05
	(c)	What is the importance of control charts in pharmaceutical processings	05
Q.3	(a)	What is supercritical fluid? Enlist application of SCF	06
	(b)	What is Rapid Expansion of Supercritical Solution (RESS) technique?	05
	(c)	Explain various processes and equipments used in supercritical fluid application.	05
Q.4	(a)	Draw schematic diagram of control chart and describe elements of control chart.	06
	(b)	Explain C chart and P chart for attributes.	05
	(c)	What are the advantages and limitations of Carbon dioxide as SCF?	05
Q.5	(a)	Define extrusion and spheronization. Discuss about production of pellets by extrusion-spheronization	06
	(b)	Short note on M.C.C in pelletization.	05
	(c)	Write a note on Hot melt extrusion	05
Q. 6	(a)	Define content uniformity. What are different sampling techniques for content uniformity test?	06
	(b)	Explain the rate holing and arching. Discuss its cases and remedies.	05
	(c)	Compare and contrast: Uniformity of dosage as per IP and USP.	05
Q.7	(a)	Give Comment on-Supercritical fluid can improve bioavailability through dissolution enhancement.	06
	(b)	Discuss factors affecting pellet properties.	05
	(c)	What are the regulatory requirements for weight variation test for solid dosage form as per IP.	05
