

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.

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|-------------|-----|--|-----------|
| 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 |
