

Seat No.: _____

Enrolment No. _____

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

Subject Code: 2230002**Date: 19-11-2019****Subject Name: Pharmaceutical Engineering****Time: 10:30AM TO 01:30PM****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) Classify the types of fluid flow & Explain Reynold's number. | 06 |
| | (b) Discuss the experiment of Orifice meter. | 05 |
| | (c) Write a note on Transportation of fluids. | 05 |
| Q.2 | (a) Explain Bernoulli's Theorem in detail. | 06 |
| | (b) Derive corollary of Dalton's law and Amagat's law. | 05 |
| | (c) Enlist different types of valve. Describe check valve. | 05 |
| Q.3 | (a) Explain heat transfer by forced convection in laminar and turbulent flow. | 06 |
| | (b) Discuss the applications of gas laws. | 05 |
| | (c) Explain briefly Bucket type steam trap. | 05 |
| Q.4 | (a) Differentiate Venturimeter and Rotameter. | 06 |
| | (b) Write the applications of heat transfer. | 05 |
| | (c) What is Radiation-Black body? Differentiate Absorptivity & Emmisivity. | 05 |
| Q.5 | (a) Write a short note on Solid mass transfer. | 06 |
| | (b) Describe with diagram Centrifugal pump. | 05 |
| | (c) Explain briefly study of steam table. | 05 |
| Q. 6 | (a) Discuss the method for Liquid handling. | 06 |
| | (b) Explain Colour coding Pipelines in Material Handling system. | 05 |
| | (c) Write the general principles of Stoichiometry? Explain Tie substances. | 05 |
| Q.7 | (a) Write a short note: Corrosion. | 06 |
| | (b) Discuss the Concept of boundary layers. | 05 |
| | (c) Explain basic equations of fluid flow. | 05 |
