

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 2 EXAMINATION – SUMMER -2019

Subject Code: BP203TP

Date: 31-05-2019

Subject Name: Pharmaceutical Engineering

Time: 10:30 AM TO 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.

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|-------------|---|-----------|
| Q.1 | (a) Enlist types of manometer. Describe Inclined manometer in detail. | 06 |
| | (b) Explain critical speed of Ball mill. | 05 |
| | (c) Define following terms (i) Number of sieve (ii) Nominal size of aperture (iii) approximate percentage sieving area (iv) sifting (v) Moderately fine powder. | 05 |
| Q.2 | (a) Explain Heat exchangers. | 06 |
| | (b) Define evaporation. Give principle & operation of forced circulation evaporator. | 05 |
| | (c) Classify distillation methods. Explain molecular distillation. | 05 |
| Q.3 | (a) Give principle & construction of fluidized bed dryer with its merits & demerits. | 06 |
| | (b) Explain mechanism of mixing in solids. | 05 |
| | (c) Write a note on Silverson Emulsifier. | 05 |
| Q.4 | (a) Write Principle, Construction, Working, Uses, Merits and demerits of plate & frame filter press with diagram. | 06 |
| | (b) Differentiate surface filtration & depth filtration with diagram. | 05 |
| | (c) Explain centrifuge to separate two immiscible liquids with labeled diagram. | 05 |
| Q.5 | (a) Explain factors affecting selection of materials for pharmaceutical plant construction | 06 |
| | (b) Write a note on Ferrous and nonferrous metals. | 05 |
| | (c) Discuss types of corrosion and there prevention. | 05 |
| Q. 6 | (a) Explain following terms (i) CMC (ii) EMC (iii) Loss on Drying. | 06 |
| | (b) Explain laws governing size reduction. | 05 |
| | (c) Draw a labeled diagram of venturi-meter & explain its construction & working. | 05 |
| Q.7 | (a) Differentiate (i) Conduction & Convection (ii) Drying & Evaporation | 06 |
| | (b) Explain fractional distillation with detailed diagram. | 05 |
| | (c) Describe Principle, Construction, Working, & Uses of Meta filter with diagram. | 05 |
