

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER- II • EXAMINATION –WINTER -2020

Subject Code: PHARMACEUTICAL ENGINEERING Date: 08/03/2021

Subject Name: BP203TP

Time: 10:30AM TO 12:30PM

Total Marks: 54

Instructions:

1. Attempt any **THREE** questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| Q.1 | (a) | Give the difference between Orifice meter and Venturimeter. | 06 |
| | (b) | Give a short note on Bernoulli's theorem and its applications | 05 |
| | (c) | Discuss Objectives, applications & mechanism of size separation. | 05 |
| Q.2 | (a) | Describe the mechanisms of size reduction with suitable examples of Equipment. | 06 |
| | (b) | Describe fluid energy mill. | 05 |
| | (c) | Give a note on official standards of powders. | 05 |
| Q.3 | (a) | Discuss factors affecting mixing. | 06 |
| | (b) | Give a short note on planetary mixers. | 05 |
| | (c) | Enlist mixers for liquids. Describe Turbine mixers. | 05 |
| Q.4 | (a) | Explain in brief: Rotary drum filter | 06 |
| | (b) | Explain the conical disc centrifuge or De Laval Clarifier. | 05 |
| | (c) | Give Principle, Figure, Working, and Advantages, Disadvantages of a dryer used for Thermo labile and hygroscopic Material. | 05 |
| Q.5 | (a) | Give a short note on Fractional Distillation. | 06 |
| | (b) | Write a note on Falling film and Climbing film evaporator. | 05 |
| | (c) | Give a short note on Heat transfer by conduction, convection & radiation. | 05 |
| Q. 6 | (a) | What is Solids-Material Handling System? Give its classification and explain any one in detail. | 06 |
| | (b) | Enumerate the Factors Influencing Selection of Materials and Explain Physical factors in detail. | 05 |
| | (c) | Explain importance of corrosion. Discuss theory of corrosion. | 05 |
| Q.7 | (a) | What is thermal radiation? Explain the concept of Black body and Gray body in thermal radiation. | 06 |
| | | OR | |
| | (a) | Give a brief note on ball mill. | 06 |
| | | OR | |
| | (a) | Discuss in brief overall heat transfer coefficient. | 06 |