

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Pharm. - SEMESTER- II • EXAMINATION – SUMMER -2020**

**Subject Code: BP203TP****Date: 28-10-2020****Subject Name: Pharmaceutical Engineering****Time: 10:30 AM TO 1:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

<b>Q.1</b>	(a) Explain Bernoulli's Theorem in detail.	<b>06</b>
	(b) Discuss principle, construction, working and advantages of Rotameter.	<b>05</b>
	(c) Discuss the objectives and various mechanisms of size reduction with examples.	<b>05</b>
<b>Q.2</b>	(a) Write a note on construction, principle, working and applications of ball mill.	<b>06</b>
	(b) Give the classification of powders based on size and list the specification and standard for sieves.	<b>05</b>
	(c) Describe with a clean and labeled diagram the construction, principle, working, advantages, disadvantages and application of cyclone separator.	<b>05</b>
<b>Q.3</b>	(a) Write down in detail about different methods of heat transfer.	<b>06</b>
	(b) Define and explain the terms with appropriate example i) Heat exchanger      ii) Black body	<b>05</b>
	(c) Explain principal, construction, working, merits and demerits of climbing film evaporator with labeled diagram.	<b>05</b>
<b>Q.4</b>	(a) Describes the factors influencing evaporation process.	<b>06</b>
	(b) Describe with labeled diagram steam distillation.	<b>05</b>
	(c) Write a note on Distillation under reduced pressure.	<b>05</b>
<b>Q.5</b>	(a) Draw the drying rate curve and explain the different stages of it.	<b>06</b>
	(b) List out Dryers. Write a note on drum dryer.	<b>05</b>
	(c) Explain principle, construction, working, applications, advantages and disadvantages of sigma-blade mixer with the help of a diagram.	<b>05</b>
<b>Q.6</b>	(a) Classify impeller and explain all.	<b>06</b>
	(b) Describe the construction and working of meta filter with diagram.	<b>05</b>
	(c) Write a note on factors affecting filtration Process.	<b>05</b>
<b>Q.7</b>	(a) Explain theory of centrifugation. Give its applications in pharmacy.	<b>06</b>
	(b) Discuss in detail Non-Perforated basket type centrifuge.	<b>05</b>
	(c) Explain different types of corrosion with its prevention.	<b>05</b>

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