

Roll No.: _____

Enrolment No. _____

PARUL UNIVERSITY
PARUL INSTITUTE OF PHARMACY AND RESEARCH
B.PHARM THIRD SEMESTER
SECOND INTERNAL THEORY EXAMINATION: 2021-22

Subject Name: Pharmaceutical Engineering
Subject Code: BP304T
Time: 2:00 to 3:15 PM

Date: 31/08/2021
Total Marks: 30

Instructions:

1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions:

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| (1) The literature of heat transfer generally recognizes distinct modes of heat transfer. How many modes are there?
a) One b) Two c) Three d) Four | 01 |
| (2) Unit of the rate of heat transfer is
a) Joule b) Newton c) Pascal d) Watt | 01 |
| (3) How many types of convection process are there?
a) One b) Three c) Four d) Two | 01 |
| (4) The equipment used for evaporation known as
a) Distillation assembly b) Evaporator c) Heating mantle d) Dryer | 01 |
| (5) Factor affecting evaporation process are
a) Temperature b) Time of evaporation c) Surface area d) All of above | 01 |
| (6) Vortex formation takes place
a) In un baffled tanks (b) At high impeller speed (c) when blades in turbine arranged perpendicular (d) All of the above | 01 |
| (7) Which of the following is not mechanism involved in solid solid mixing?
a) Convective (b) Bulk Transport (c) Diffusive (d) Shear | 01 |
| (8) Higher the value of mixing index, greater will
a) solubility (b) Viscosity (c) Density (d) Homogeneity | 01 |
| (9) Which of the following is also known as V cone blender?
a) Double cone (b) Twin Shell (c) Ribbon (d) silverson emulsifier | 01 |
| (10) The movement of large portion of material from one location to another is called
a) Bulk Transport (b) Diffusion (c) Agitation (d) Convection | 01 |

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Q.2 Long Answers: (Any One)

- 1) Give detail note on silverson emulsifier (with labeled diagram) **10**
- 2) Draw a neat and clean labeled diagram of single pass or tubular heater and explain in detail it's principle, working, construction, advantages, disadvantages and uses. **10**

Q.3 Short Answers: (Any Two)

- 1) Draw a neat and clean labeled diagram of vertical tube evaporator and explain in detail it's principle, working, and construction. **05**
- 2) Write a note on applications of evaporation. **05**
- 3) Write a note on turbines and paddles. **05**