Sub Code:BOP232

Paper Id: 150322 Roll No:

**B. PHARM.**

**(SEM-III) THEORY EXAMINATION 2019-20**

**PHARMACEUTICS-II** (UNIT OPERATIONS)

***Time: 3 Hours*** ***Total Marks: 100***

**Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt *all* questions in brief. 2 x 10 = 20**

a. Describe the principle of Stoichiometry with a suitable example.

b. What are Derived Units? Give example.

c. Differentiate between Surface Filtration & Depth Filtration.

d. What do you mean by Centrifugal Effect?

e. Define CMC and EMC

f. Express any two mode of heat transfer.

g. What do you mean by Eutectic Point?

h. Define Refrigerant. Give two examples of Primary Refrigerants.

i. What is the difference between *toxicity* & *hazard*?

j. Give two examples of non ferrous metals.

**SECTION B**

**2. Attempt any *three* of the following: 10x3=30**

a. Discuss about Open Loop and Closed Loop Control System in details with examples.

b. What are the factors affecting Filtration? With a neat and labeled diagram, describe the construction and working of Edge Filter.

c. How do you classify Dryers? Describe the construction, working and principle of Spray Dryer.

d. With a neat and clean diagram explain the principle and working of Air Conditioner.

e. Classify material of construction. Write a descriptive note on Stainless Steel.

**SECTION C**

**3. Attempt any *one* part of the following: 10x1=10**

a. Explain the terms Steady State & Unsteady State. Add a note on Equilibrium State and Rate Process.

b. Write a descriptive note on
i Temperature Measurement
ii) Pressure Measurement.

**4. Attempt any *one* part of the following: 10x1=10**

a. What do you mean by Water for Injection? How will you prepare WFI on industrial scale?

b. Describe principle, construction, working and uses of Supercentrifuge.

**5. Attempt any *one* part of the following: 10x1=10**

a. What are pharmaceutical applications of Drying? Explain the principle and working of Fluidized Bed Dryer

b. What do you mean by Bound Water and Unbound Water? Describe the Drying Rate Curve for porous granular solids.

**6. Attempt any *one* part of the following: 10x1=10**

a. Write a descriptive note on the mechanisms of Humidification and Dehumidification.

b. What is Psychometric Chart? Describe the important features & significance of humidity chart in pharmacy.

**7. Attempt any *one* part of the following: 10x1=10**

a. What is Corrosion? Name the various types of corrosion. How can corrosion be prevented?

b. Write short note on
i) Accident Records
ii) Fire Hazards