

Roll No.....

Sub Code: BP304T

B PHARM (SEM-III)
THEORY EXAMINATION 2021-22
PHARMACEUTICAL ENGINEERING

Time: 3 Hours

Total Marks: 75

Note: Attempt all Sections.

SECTION A

Very Short Answer (Attempt all questions)

10 x 2 = 20

- a. Differentiate between Fluid Statics & Fluid Dynamics.
- b. Define Attrition & Impact?
- c. What is the difference between Sedimentation & Elutriation?
- d. State and express Fourier's Law of heat transmission with equation.
- e. How evaporation differs from drying and distillation?
- f. Write the principle of Steam Distillation.
- g. What do you mean by Sublimation?
- h. Differentiate between Mixing & Blending. What do you understand by dead spot in solid mixing?
- i. Express the mechanisms of Impingement & Entanglement.
- j. What is meant by under-driven and over-driven assembly? Give examples also.

SECTION B

Short Answer (Attempt any 5 questions)

5 x 7 = 35

- a. Describe Reynolds's experiment elucidating different types of flow patterns.
- b. Draw a neat and labeled diagram of a Shell & Tube Heat Exchanger and explain its construction and working.
- c. Describe the principle, construction, working and uses of Fluidized Bed Dryer.
- d. Describe the principle, construction working and uses of Twin Shell Blender.
- e. Explain theories of filtration. Add a note on objectives of filtration.
- f. Describe the principle, construction working and uses of Perforated Basket Centrifuge.
- g. Write a note on different types of Stainless Steel, its composition and its uses.

SECTION C

Long Answer (Attempt any 2 questions)

2 x 10 = 20

- a. State and derive Bernoulli's equation.
- b. What do you understand by Multiple Effect Evaporator? Describe construction & working of triple effect evaporator? Add a note on economy of multiple effect evaporators.
- c. Explain with the help of diagram the principle, working and applications of Flash Distillation.