PAPER ID-310281

Roll No:

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Subject Code: BP304T

BPHARM
(SEM III) THEORY EXAMINATION 2023-24
PHARMACEUTICAL ENGINEERING

TIME: 3 HRS M.MARKS: 75

Note: Attempt all Sections.

SECTION A

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

a. Draw a labeled diagram of fluid energy mill.
b. Ball mill is not useful for size reduction of fibrous material. Explain
c. Define distillation.
d. Explain Fourier's law for conduction of heat.
e. Suggest suitable equipments for solid-solid mixing.
f. What is free moisture content.
g. Write use of super centrifuge.
h. What are filter aids?
i. What is corrosion?
j. Classify materials used for the construction of the plant.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Describe the principle, construction, working, uses and merits of the ball mill with a well labeled diagram.
b. Explain the basic principle and methodology of flash distillation.
c. Describe various types of corrosion and suggest the methods to prevent the same in the pharmaceutical industry.

SECTION C

3. Attempt any *seven* parts of the following: **7 x 5 = 35**

a. Describe the construction, working, uses and merits of cyclone separator.
b. Explain the working of any one heat interchanger with a labeled diagram.
c. How do you classify dryers? Explain the principle of drum dryer.
d. Write a note on perforated basket centrifuge.
e. Write a note on the utility of glass and stainless steel in pharmaceutical industry.
f. Give a neat sketch of venturi meter and explain its principle and working.
g. Discuss factors influencing evaporation.
h. Draw the neat sketch of the ribbon blender and give its principle, working and application.
i. Describe the construction, working, uses, merits and demerits of the filter leaf with a well labeled diagram.