Subject Code: BP304T

PAPER ID-311528

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM III) THEORY EXAMINATION 2024-25
PHARMACEUTICAL ENGINEERING

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

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

a.	What is critical speed of a ball mill.
b.	Define Reynold number.
c.	What is convection?
d.	State Bernoulli's theorem
e.	How does tray dryer works in a pharma industry?
f.	Justify with examples the differences between solid and liquid mixing .
g.	What is filter aid and filter media?
h.	What is grey body and black body?
i.	What is the difference between Sedimentation & Elutriation?
j.	What is galvanic corrosion?

SECTION B

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

a.	Suggest the factors affecting size reduction. Explain with a diagram the working principles, applications and process of size reduction of ball mill.
b.	Narrate the various types of corrosion. Suggest some measures to control such corrosion
c.	Draw and explain drying rate curve. Write a short note on fluidized bed dryer

SECTION C

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

a.	What is filter aid? Explain the various factors influencing filtration.
b.	Discuss the working uses, merits and demerits of Perforated basket centrifuge, Non-perforated basket centrifuge
c.	What are the various processes of heat transfer ? Explain the various types of shell and tube heat exchangers with the help of diagrams.
d.	Explain the principles, construction and uses of twin shell blender.
e.	What is filter aid? Explain the various factors influencing filtration.
f.	Explain steam and molecular distillation alongwith its pharmaceutical applications
g.	Write short notes on: i. Sieve shaker ii. Pitot tube

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