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

BPHARM
(SEM III) THEORY EXAMINATION 2021-22
PHARMACEUTICAL ENGINEERING

Time: 3 Hours   *Total Marks: 75*
Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

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

a.	Give the difference between evaporation and drying.
b.	Define filtration.
c.	Draw the labelled diagram of non perforated basket centrifuge.
d.	Write Reynold's equation.
e.	Define size reduction.
f.	Write the statement of Raoult's law.
g.	List the types of corrosion.
h.	Distinguish the solid and liquid mixing.
i.	Define centrifugation.
j.	Discuss the advantages of double cone blender.

SECTION B

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

a.	Explain the principles, construction, working, uses, merits and demerits of ball mill with suitable diagram.
b.	Summarize the factors affecting selection of material for pharmaceutical plant construction.
c.	Explain the theory and applications of centrifugation.

SECTION C

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

a.	Discuss Fourier's law of heat transfer and its applications.
b.	Show the basic principle and applications of steam distillation with a neat sketch.
c.	Describe the applications and mechanisms of size reduction.
d.	Outline the principle, construction, working, uses, merits and demerits of planetary mixer using suitable diagram.
e.	Discuss the factors influencing filtration.
f.	Describe the principle and working of filter leaf with a clear and labelled diagram.
g.	Describe the different phases of drying using rate of drying curve.