2 4·5·1 0

B.Pharmacy (Sem. - 4ᵗʰ)
PHARMACEUTICS - III
(Unit Operations - II)
SUBJECT CODE : PHM - 2.4.1
Paper ID : [D0117]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   **Maximum Marks : 80**

Instruction to Candidates:

1) Section - A is **Compulsory**.

2) Attempt any **Four** questions from Section - B.

3) Attempt any **Three** questions from Section - C.

Section - A

Q1)   *(15 × 2 = 30)*

a) Material balance.

b) Black body

c) Moisture content.

d) Bioreactor.

e) Boiler capacity.

f) Rectification.

g) Size reduction by attrition.

h) Sensible heat of steam.

i) Drying as unit operation.

j) Phase diagram.

k) Laws governing energy and power requirements of mills.

l) Automated process control.

m) Theoretical plate.

n) Unit process.

o) Evaporation.

R-272   *P.T.O.*

Section - B

(4 × 5 = 20)

Q2) Discuss the use of steam as heating media.

Q3) Narrate the various factors affecting size reduction.

Q4) Write a note on various factors to be considered while designing a reactor.

Q5) Discuss the various process control systems.

Q6) Discuss the construction and working of ribbon mixers.

Section - C

(3 × 10 = 30)

Q7) With the help of a diagram explain how you will calculate the number of theoretical plates required in a distillation.

Q8) Discuss the behavior of solids during drying and explain how you will classify solids on the basis of this behavior.

Q9) Discuss a mill based on the principle of impact and attrition.

Q10) With the help of diagram discuss the construction and working of climbing film evaporator.

# # # #