31.5.10

Roll No. .....

Total No. of Questions : 10] [Total No. of Pages : 02

B. Pharmacy (Sem. -3rd)

PHARMACEUTICS - II

(Unit Operations - I)

SUBJECT CODE : PHM - 2.3.1

Paper ID : [D0112]

[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) Define *(15 × 2 = 30)*

a) Crystallization.

b) Compressor.

c) Psychrometric charts.

d) Reynold's Number.

e) Edge filter.

f) Bunkers.

g) Manometers.

h) Rate of filtration.

i) Adiabatic saturation temperature.

j) Bins.

Distinguish between

k) Pumps and valve.

l) Saturated solution and supersaturated solution.

m) Air conditioning and humidity.

n) Fans and blowers.

o) Filtration and centrifugation.

Section - B

(4 × 5 = 20)

Q2) Explain industrial hazards and necessary safety precautions needed to overcome it.

Q3) How pressure difference across incline tube manometer could be estimated.

Q4) What is vacuum crystallizer?

Q5) How humidity and its other parameters such as bone dry air, saturated volume and relative humidity could be estimated.

Q6) Explain properties and application of steel.

Section - C

(3 × 10 = 30)

Q7) (a) Highlight filter press.
(b) Explain the working of rotary filter.

Q8) Enumerate different types of pumps used in the pharmaceutical industry.

Q9) A rotary filter turns at the rate of 3rpm. The fraction of total filtering area immersed in the slurry is 0.3. It has been observed that 2 cu.ft. of filtrate is delivered per minute per sq.ft. of submerged area with a given slurry under these operating conditions. If 6.0 cu. ft. of the filtrate is delivered per revolution by this rotary filter, what is the total area of the filter cloth on the drum.

Q10) Comment on the following
(a) Seeding is not necessary in continuous crystallizers.
(b) Filter presses can be employed for sterile filtration.
(c) Wet bulb temperature measures moisture content of air.