Roll No. .....

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

Paper ID [D0112]

(Please fill this Paper ID in OMR Sheet)

B.Pharmacy (Sem. - 3rd)

PHARMACEUTICS - II (UNIT OPERATION - I) (PHM - 2.3.1)

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)*

Define:

a) Humidity.
b) Supersaturation.
c) Vena contracta.
d) Mole fraction.
e) Unit operation.
f) Psychrometric charts.

Distinguish between:

g) Positive displacement pumps and centrifugal pumps.
h) Fans and blowers.
i) Diaphragm pumps and Reciprocating pumps.
j) Newtonian and non newtonian fluids.
k) Give advantages of incline manometer over simple manometer.
l) The density of talc is reported as 2.7 gm/ml Express the same in SI system (kg/m^3).
m) Give any two examples of flow meters.
n) Write the applications of Screw Conveyors Over Pneumatic Conveyors.
o) Give any four varieties of stainless steel.

Section - B

(4 × 5 = 20)

Q2) Explain theories of crystallization?

Q3) How Psychrometric charts are used to estimate humidity parameters.

Q4) Enumerate various types of manometers.

Q5) Highlight Swenson Walker crystallizer with advantages.

Q6) Give Construction, Principle, Working of Double acting, Piston Pump.

Section - C

(3 × 10 = 30)

Q7) Water is to pumped through a height of 70 meter to an open overhead tank with a velocity of 1m/s. The pressure drop in the line is 10 meters of water. Calculate the horsepower of a pump with 50% efficiency needed to pump water at the rate of 500 gpm.

Q8) Describe Principle, Construction, working of non washing and washing type plate and frame filter press.

Q9) Define and classify pumps? Explain with neat diagram, any two pumps.

Q10) Write short note on any two:

(a) Industrial hazards.

(b) Conveyers.

(c) Corrosion.