

MALIBA PHARMACY COLLEGE, TARSADI
MID-SEMESTER EXAM - I

SEMESTER – I

030020101 –Pharmaceutical Engineering

Max. Marks: 20

103 Date: 24/09/2012

Time: 1 Hour.

Instruction

1. Attempt all Questions.

1. Define the following terms. (5)
 - a. Stoichiometry
 - b. Unit Operatfon
 - c. Unit Processes
 - d. Key Substance
 - e. Mole Fraction

2. Answer the following questions. (10)
 - a. Derive the equation $PV = nRT$ (3)
 - b. Convert $500\text{Lb}/\text{Ft}^3$ to Kg/M^3 (2)
 - c. Convert 200 mm Hg to Lbf/In^2 (2)
 - d. Wet granules containing 30% water is being dried, to yield granules ready for compression containing 10% water. The cost of drying is Rs. 10/kg of water removed. What is the drying cost per kg of initial wet granules? (3)

3. Answer the following questions. (5)
 - a. Write the statement of Fourier's law. Derive the equation of Fourier's Law (3)

OR

- a. Derive the equation for compound resistance in series. (3)
- b. Under which circumstances Logarithmic mean area and arithmetic mean area are to be used when calculating rate of heat transfer? (1)
- c. Define thermal conductivity. (1)
