No. of Printed Pages : 4
Roll No.....

220515

1st Sem / NEP

Branch : Chemical Engg (P & P)

Sub.: Introduction to Chemical Engineering

Time : 3 Hrs. **M.M. : 60**

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 What is the unit of specific gravity?

a) M/s^2 b) N/m^3

c) Kg/m^3 d) None

Q.2 What is the oldest chemical in the world?

a) Phosphorus b) Copper

c) Aluminium d) Silver

Q.3 What is Reynolds number for laminar flow?

a) Less then 4000 b) Less than 3000

c) Less than 2000 d) None

Q.4 Choose non Newtonian fluid of the following

a) Alcohol b) Honey

c) Water d) Blood

Q.5 Which method of heat transfer is the slowest?

a) Conduction b) Convection

c) Radiation d) None

Q.6 Chemical formula of urea is

a) CH_4NO b) CH_4N_2O

c) CH_3NO_2 d) None

Section-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Mention any one role of chemical Engineer.

Q.8 What is the unit of density?

Q.9 Name any one type of boiler used in Chemical Industry.

Q.10 What is loading in mass transfer?

Q.11 What is reversible reaction?

Q.12 Who obey Raoult's law?

Section-C

Note: Short answer type Question. Attempt any Eight questions out of Ten Questions. (8x4=32)

Q.13 Explain in brief history of Chemical Engineering.

Q.14 Define mass fraction and mole fraction.

Q.15 Describe Newton's law of viscosity.

Q.16 List various types of pumps and compressors used in Chemical industries.

Q.17 Discuss various modes of heat transfer with examples.

Q.18 Differentiate free and forced convection.

Q.19 Define mass transfer and diffusion.

Q.20 Give the classification of equipments for distillation used in Chemical industries.

Q.21 Explain exothermic and endothermic reaction.

Q.22 Make a flow sheet for manufacturing process of Urea.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x8=16)

Q.23 Explain in detail concept of batch, semi batch & continuous process.

Q.24 Define rate of reaction, rate reaction, order of reaction and molecularity reaction.

Q.25 Write short notes on any two of the following:

a) Fick's law of diffusion

b) Statement of Stefan Boltzmann's law

c) Specific weight and specific gravity

d) Unit operation