

SECTION-D

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

- Q.23 Explain in detail about various unit processes used in chemical industries by giving suitable example of each.
- Q.24 Discuss about various modes of heat transfer and their corresponding Laws in detail.
- Q.25 Explain manufacturing process of Urea with neat and clean flowsheet.

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Roll No.

1st Sem / Chemical

Subject : Introduction to Chemical Engineering

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Chemical Engineering is the application of the principles of
- a) Mathematics b) Physical Science
- c) Economics d) All of these
- Q.2 Which of the following is a unit operation
- a) Nitration b) Oxidation
- c) Distillation d) Reduction
- Q.3 For Laminar flow, Reynold number should be
- a) Less than 2100 b) More than 2100
- c) Less than 4000 d) More than 4000

- Q.4 Thermal conductivity is highest in case of
- a) Liquids b) Solids
c) Gases d) Fluids
- Q.5 Sum of powers of the concentration terms in the rate equation is called _____ of the reaction.
- a) order b) molecularity
c) rate d) none of these
- Q.6 Which of the following is not a mass transfer operation
- a) Distillation b) Conduction
c) Humidification d) Extraction

SECTION-B

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

- Q.7 In unit process only _____ change occurs. (Physical/ Chemical)
- Q.8 Fluid statics deal with study of fluid at _____. (Rest/ Motion)
- Q.9 Give full form of CSTR.
- Q.10 Write one example of radiation.

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- Q.11 Define diffusion.
- Q.12 Write chemical formula of Urea.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Describe in detail about history of Chemical Engineering.
- Q.14 Distinguish between unit process and unit operations. (any four)
- Q.15 Discuss about any four properties of a fluid.
- Q.16 State and explain Newton's Law of viscosity.
- Q.17 State & Explain Fourier's Law of heat conduction.
- Q.18 Classify different types of heat exchangers and boilers used in chemical industries.
- Q.19 Define diffusivity and write its unit.
- Q.20 Explain any four mass transfer operations.
- Q.21 Differentiate between exothermic and endothermic reaction. (any four)
- Q.22 Write the classification of reactions used in chemical Industry.

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