

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Define Heat transfer. Explain Modes of Heat from with examples & Diagrams.

Q.4 Explain critical thickness of insulation with Derivation.

Q.5 Describe about steady state heat conduction through a Composite wall with derivation.

Q.6 Write down any two:-

- i) Boiling.
- ii) Connection
- iii) Grey body
- iv) View factor

Q.7 Define Condensation. Explain with diagram & examples of Types of condensation.

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Roll No.

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3rd Sem. / Chem. P&P

Subject : Heat Transfer-I

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Write Modes of Heat transfer.

b) What is Conduction.

c) Define Fourier Law.

d) What is unsteady state.

e) Write name of any two insulating material.

f) Define forced convection.

g) Write examples of radiation.

h) What is Grey body.

i) Write Reynold Number.

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- j) Draw diagram of open pan evaporator.
- k) What is Condensation.
- l) Give examples of evaporation.
- m) Define Wein's displacement Law.
- n) What is emission.
- o) How radiative heat exchange b/w. Black bodies.
- p) Define insulation.
- q) Give examples of Heat Transfer.
- r) Write view factor.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) Write concept of steady state Heat transfer.
 - ii) Explain about Thermal conductivity with diagram.

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- iii) Discuss insulation.
- iv) Explain about Dimensional analysis.
- v) Write about Grey body & Black body.
- vi) Differentiate b/w steady state & unsteady state.
- vii) Explain Thermal Conductivity.
- viii) Discuss Radiation shield.
- ix) Difference b/w free & forced convection.
- x) Describe about evaporation.
- xi) Explain steady state heat conduction through plain wall.
- xii) Describe about Physical properties of insulation.
- xiii) Define convection, write about Peclet Number.
- xiv) Write Kirchoff's & Plank's Law.
- xv) Write about absorption.

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