Q.22 Write any five properties required for good conducting material.

SECTION-D

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

Q.23 Name type of the feeding arrangements in multiple effect evaporator. Explain them with neat diagram.

Q.24 State and explain Fouries,s law of conduction and write its assumptions

Q.25 Explain any two

a) overall heat transfer coefficient.

b) Monochromatic Emissive power

c) Insulators

4th Sem / Chemical Engineering P&P

Subject : Heat Transfer

Time : 3 Hrs.　　　　　　　　　　　M.M. : 60

SECTION-A

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

Q.1 What is unit of T in $q = -KAT/x$?

a) m^2　　　　　　b) ^0C

c) Kg　　　　　　　d) None

Q.2 What are the symbol of overall heat transfer coefficient?

a) h　　　　　　　b) A

c) U　　　　　　　d) None

Q.3 What is unit of LMTD

a) Meter　　　　　b) Litre

c) Centigrade　　　d) None

Q.4 Which type of flow give higher rate heat transfer in heat exchanger?

a) Parallel flow   b) Counter flow

c) Mix flow   d) None

Q.5 How many modes of heat transfer are used ?

a) 1   b) 2

c) 3   d) 4

Q.6 Expand LMTD

a) Long mean temp. data

b) Long mean temp. detail

c) Long mean temp. Difference

d) None

SECTION-B

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

Q.7 What is the formula of prandtl number

Q.8 Write the driving force in conduction heat transfer.

Q.9 Write the application of Rayleigh's method

Q.10 What is the emissive power of black body

Q.11 Write any one objective of evaporation

Q.12 Why conductor is used?

SECTION-C

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

Q.13 Explain Newton's cooling law of convection

Q.14 Write unsteady state conduction

Q.15 Write a note on dimensional analysis

Q.16 Give the equation for Reynold's no. and Nusselt no.

Q.17 Define grey body

Q.18 State and Explain Kirchoff's law

Q.19 Define wein's displacement law

Q.20 Define LMTD

Q.21 Draw a neat sketch of shell and tube heat exchanger