

- Section-D**
- Note: Long answer type questions. Attempt any two questions out of three Questions. (2x10=20)**
- Q.36 Explain in detail exchange of energy between 2 parallel planes of different emissivity.
- Q.37 Explain in detail the various insulation material used in industry.
- Q.38 Classify different types of evaporators. Explain any one with neat sketch.

4th Sem.
Branch : P & P Chem. Engg. (Spl. Paint Tech) Chem
Engg. (Spl. Polymer Engg.)
Subject : Heat Transfer

Time : 3 Hrs. **M.M. : 100**

Note: Multiple Choice Questions. All Questions are compulsory. (10x1=10)

- Q.1 Mark the matter with least value of thermal conductivity
- a) Air b) Water
c) Ash d) Window Glass
- Q.2 Multipass heat exchangers are used to obtain high_____.
- a) Metal b) Heat transfer
c) Liquid d) None
- Q.3 What is steam economy is case of a single operator system?
- a) 1 b) >1
c) <1 d) 0.1
- Q.4 What is the unit of rate of heat transfer?
- a) Joule b) Newton
c) Pascal d) Watt

(1) 180643/120643/116843

- Q.5 Select type of fin.
- a) Parallel b) Horizontal
- c) Longitudinal d) Lateral
- Q.6 The boiling phenomenon is known to occur in how many forms?
- a) 1 b) 2
- c) 3 d) 4
- Q.7 How many types of heat transfer?
- a) 1 b) 2
- c) 3 d) 4
- Q.8 Select poorest conductor of heat.
- a) Gold b) Mercury
- c) Metal d) Lead
- Q.9 What is the symbol of overall heat transfer coefficient
- a) H b) U
- c) A d) None
- Q.10 Heat flow mechanism through solid is known as _____.
- a) Conduction b) Convection
- c) Radiation d) None

(2) 180643/120643/116843

Section-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What is log mean area?
- Q.12 Mention the application of rayleigh's method.
- Q.13 What is natural convection.
- Q.14 Mention any 1 way of reducing fouling.
- Q.15 Which evaporator is used for foamy liquid?
- Q.16 Give any 1 property of insulator.
- Q.17 Name the different types of flow arrangement in the exchanger.
- Q.18 Name any one type of insulating material.
- Q.19 What is the purpose of glass wool?
- Q.20 What is the geometric mean area?

SECTION-C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Mention the relationship of heat transfer from composite bodies.
- Q.22 Mention any 5 properties required for good insulating materials.
- Q.23 Explain Wein's displacement law.

(3) 180643/120643/116843