Q.18 How does a shell and tube condenser work? (CO1)

Q.19 Write any four differences between longitudinal fins and transversal fins. (CO2)

Q.20 Explain how to calculate the overall heat-transfer coefficient. (CO2)

Q.21 Describe the flow arrangement in Heat Exchangers. (CO1)

Q.22 Draw a neat diagram of Double Pipe Heat Exchanger. (CO1)

SECTION-D

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

Q.23 Explain construction & working of Shell and Tube Heat Exchanger with its diagram. (CO1)

Q.24 Discuss the construction and working of contact heat condenser with its neat and clean diagram. (CO3)

Q.25 Discuss the construction, working, advantages, and applications of a Babcock and Wilcox boiler. (CO3)

No. of Printed Pages : 4 220552
Roll No. .....

5th Sem / Chemical

Subject : Heat Transfer Operations - II

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Condensation refers to a change from the (CO3)

a) Solid to a liquid phase

b) Vapor to a liquid phase

c) Liquid to a solid phase

d) Liquid to a vapor phase

Q.2 Baffles in the shell side of a shell and tube heat exchanger (CO1)

a) Increase the cross-section of the shell side liquid

b) Force the liquid to flow parallel to the bank

c) Increase the shell side heat transfer co-efficient

d) Decrease the shell side heat transfer co-efficient

Q.3 To calculate the temperature difference in a double pipe heat exchanger, we use _____ (CO1)

a) LMTD

b) Mean temperature difference

c) Median of the temperature difference

d) Square mean of the temperature difference

Q.4 What is the driving force for evaporation to take place? (CO4)

a) Difference in partial pressure

b) Difference in pressure

c) Difference in concentration

d) Difference in temperature

Q.5 Which of the following best describes Duhring's plot? (CO3)

a) A plot between temperature and volume

b) A plot between temperature of solution and temperature of pure solvent

c) A plot between pressure and concentration

d) A plot between vapor pressure and temperature

Q.6 In fire tube boilers, water is located (CO3)

a) Inside the tubes

b) In the combustion chamber

c) Surrounding the tubes

d) In the air passage

SECTION-B

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

Q.7 Define fouling in heat exchangers. (CO2)

Q.8 What is the main purpose of using fins in heat exchangers? (CO2)

Q.9 What does LMTD stand for? (CO1)

Q.10 What is the primary function of a condenser? (CO3)

Q.11 What is the primary function of a boiler? (CO3)

Q.12 Define capacity of an evaporator. (Co4)

SECTION-C

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

Q.13 Explain in brief open pan evaporator with neat diagram. (CO4)

Q.14 Draw a neat sketch of temperature-length curve and explain it. (CO4)

Q.15 What is Duhuring's Rule and how does it relate to boiling points? (CO3)

Q.16 Explain the concept of boiling and its significance in boiler operation. (CO3)

Q.17 How does dropwise condensation differ from film condensation ? (CO3)