Q.29 Give the classification of condenser.

Q.30 Explain the safety measure in boiler.

Q.31 Differentiate coal fired & oil fired boiler.

Q.32 Describe open pan evaporator with neat sketch.

Q.33 How do you classify the evaporator?

Q.34 Explain the working of reverberator furnace.

Q.35 List various types of furnace.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Give the classification of heat exchanger. Explain the working detail of shell & tube heat exchanger.

Q.37 Describe in detail the working & constructional detail of Lancashire boiler with neat sketch.

Q.38 Write short note on any two of the following.

a) Concept of boiling & boiling curve

b) LMTD for parallel flow with suitable assumption

c) Various feeding arrangement of liquor in evaporator

d) Advantage of shell & tube heat exchanger over double pipe heat exchanger

Roll No. .....

4th Sem / Chem, P & P

Subject:- Heat Transfer II

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Dropwise condensation usually occurs_____

a) Smooth surface b) Glazed surface

c) Cooled surface d) Oily surface

Q.2 The boiling phenomenon is known to occur in how many forms?

a) 4 b) 5

c) 6 d) 8

Q.3 What is unit of LMTD?

a) Joule b) ^{o}C

c) Second d) None

Q.4 Choose the symbol of overall heat transfer coefficient.

a) U b) H

c) V d) C

Q.5 Condensation process is very common in_____

a) Condenser b) Evaporator

c) Boiler d) All of the above

Q.6 Which is the type of condenser used for ≤3 tons cooling capacity of a refrigeration unit?

a) Oil cooled b) Air cooled

c) Water cooled d) None

Q.7 The impurities are removed from the boiler with the help of_____

a) Blow off cock b) Safety valve

c) Stop valve d) None

Q.8 Which of the following boilers is a water tube type boiler?

a) Lanka shire boiler

b) Babcock & Wilcox boiler

c) Locomotive boiler

d) All of the above

Q.9 Choose a heat treatment furnace

a) Annealing b) Muffle

c) Rotary kiln d) None

Q.10 What is the driving force in heat transfer?

a) Time b) Viscosity

c) Temperature d) Density

SECTION-B

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

Q.11 Is surface area of liquid increase the rate of evaporation?

Q.12 Rate of evaporation is directly proportional / inversely proportional to temperature of liquid.

Q.13 Why do we use LMTD correction factor?

Q.14 On which type of surface dropwise condensation usually occurs?

Q.15 Write any one purpose of using fins.

Q.16 What is the use glass wool?

Q.17 Name any one use of condenser.

Q.18 Give any two names of Industrial boilers.

Q.19 Which evaporator is best suited for foaming liquid?

Q.20 What is the use of furnace?

SECTION-C

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

Q.21 What is condensation?

Q.22 Write any four difference in dropwise condensation & film wise condensation

Q.23 Describe concept of boiling.

Q.24 Expand the term LMTD & TEMA.

Q.25 Draw neat sketch of double pipe heat exchanger.

Q.26 What is roughness of surface & their effect?

Q.27 Define overall heat transfer coefficient.

Q.28 Explain working of surface condenser.