Q.29 Write about mechanism of crystallization/crystal/ formation.

Q.30 Write about Rectification.

Q.31 Write about the McCabe Theile Method.

Q.32 Discuss the leaching through stationary solid beds.

Q.33 With diagram, discuss about plate column.

Q.34 Discuss ultra-filtration with diagram.

Q.35 Difference between Leaching and Extraction.

SECTION-D

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

Q.36 Describe the agitated tower extractor with complete details and diagram.

Q.37 Explain the construction and working of Fractionation column in details.

Q.38 Write short note on any three:-

1. Effect of temp. on adsorption
2. Plate column
3. Flash or Eqilibrium Distillation
4. Liquid extraction

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5th Sem / Branch : Chemical Engg. (P&P)
Sub.: Mass Transfer-II

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 We calculate many type of reflux ratios like

a) Total reflux ratio
b) Minimum reflux ratio
c) Optimum reflux ratio
d) All of above

Q.2 Oil extracted from soil seeds is

a) Extraction b) Distillation
c) Drying d) None of above

Q.3 The higher difference in pressure inside the tray tower cause

a) Flooding b) Loading
c) Weeping d) Dumping

Q.4 Solvent lean phase are known as

a) Extract b) Residue
c) Raffinate d) None of above

Q.5 The membrane separation processes are

a) RO b) Dialysis

c) Ultrafilteration d) All of above

Q.6 Leaching generally used for ore removal purposes

a) True b) False

Q.7 According to Raoult's law, for a pure component solution the partial pressure is equals to

a) Total pressure

b) Vapour pressure

c) Atmospheric pressure

d) Mole fraction of respective phase

Q.8 The ratio of number of moles of species A to the total number of moles of the mixture is known as

a) Mole fraction b) Mass fraction

c) Partial pressure d) Mass density

Q.9 What is the unit of diffusion coefficient?

a) m2 b) s

c) m2s d) m2/s

Q.10 According to Hendry's law,

a) Y = (p/P) b) Y = (p* P)

c) p = (Y/P) d) p = (Y*P)

SECTION-B

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

Q.11 What is azeoptrope?

Q.12 Define mass transfer?

Q.13 Write one equipment used for crystallization.

Q.14 Write formula for total reflux?

Q.15 What is separation?

Q.16 Write formula of Relative Volatility.

Q.17 Name any one distillation plant in India.

Q.18 What is flooding?

Q.19 Write one use of distillation?

Q.20 What is Adsorption?

SECTION-C

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

Q.21 Discuss about packed extraction towers?

Q.22 Classify distillation.

Q.23 Difference between Leaching and extraction.

Q.24 Describe about the construction and working of agitated tank crystallizer.

Q.25 Write about the Membrane & Types of Membrane.

Q.26 Explain the Concept of flooding, Weeping, Entrainment and loading in distillation columns.

Q.27 Explain draft tube crystallizer.

Q.28 Write about Concept of Adsorption operation & types of adsorption.