Q.20 Enlist various industrial applications of Adsorption process. (CO4)

Q.21 Draw a well labeled diagram of swenson walker crystallizer. (CO3)

Q.22 Explain the concept of Crystallization in brief. (CO3)

SECTION-D

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

Q.23 Draw diagram and explain construction and working of Bollman Extractor. (CO2)

Q.24 What is membrane separation describe about micro filtration and ultra filtration with neat & clean diagram. (CO4)

Q.25 Describe construction and working of Agitated tank crystallizer with neat and clean diagram. (CO3)

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5th Sem / Chemical

Subject : Mass Transfer Operations - II

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Leaching is a method of separating the constituents of a _____ Mixture (CO2)

a) Solid-Liquid b) Liquid-Gas

c) Solid -Solid d) Liquid-Liquid

Q.2 Which of the following is known as mother liquor

a) Solute b) Solution (CO2)

c) solvent d) filtrate

Q.3 Separating of a component from a liquid-liquid mixture by solvent is named as _____ (CO2)

a) Extraction b) Crystalization

c) Leaching d) Distillation

Q.4 In extraction_____ is used as measure of the degree of separation (CO2)

a) Volatility b) Relative Volatility

c) Selectivity d) Split ability

Q.5 The term Entrainer is used in which distillation

a) Azeotropic b) Flash (CO1)

c) Steam d) Fractional

Q.6 The feed fed to fractionating column may be (CO1)

a) Cold feed b) Saturated liquid feed

c) Saturated vapor feed d) All of these

SECTION-B

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

Q.7 Write one industrial application of adsorption process. (CO4)

Q.8 Write any one example of azeotropic distillation. (CO1)

Q.9 Write any one application of crystallization process. (CO3)

Q.10 Define Reflux ratio. (CO1)

Q.11 Define boiling point. (CO1)

Q.12 Write name of any one equipment of Leaching operation. (CO2)

SECTION-C

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

Q.13 Write any five differences between Packed and plate column. (CO1)

Q.14 Explain in brief physical and chemical adsorption. (CO4)

Q.15 Describe the concept of leaching operation with example. (CO2)

Q.16 Define Bubble point, dew point and volatility. (CO1)

Q.17 Describe the process of Extractive distillation in brief with neat diagram. (CO2)

Q.18 Derive Rayleigh Equation for batch distillation. (CO1)

Q.19 Explain Flooding and Loading problems encountered in distillation column. (CO1)