

Q.22 Explain Flash distillation and its application. (CO1)

No. of Printed Pages : 4
Roll No.

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SECTION-D

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

Q.23 Explain the construction, working and application of Swenson Walker Crystallizer with neat diagram. (CO3)

Q.24 Explain the construction, working and application of Bollman extractor with a simple sketch. (CO2)

Q.25 Write short note on any two:

1. Reverse Osmosis (CO4)
2. Selection of solvent for extraction (CO2)
3. Solubility curve (CO3)

(200)

(4)

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5th Semester/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 In liquid-liquid extraction, the liquid being extracted is called: (CO2)

- | | |
|--------------|------------|
| a) Solvent | b) Feed |
| c) Raffinate | d) Extract |

Q.2 Leaching refers to: (CO2)

- a) Solid-liquid extraction
- b) Liquid-liquid extraction
- c) Vapor-liquid Separation
- d) Filtration

Q.3 The substance that gets adsorbed is called _____ (CO4)

- | | |
|--------------|--------------|
| a) Adsorbent | b) Adsorbate |
| c) Solvent | d) Solute |

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- Q.4 Distillation is used to separate components based on _____. (CO1)
- a) Density b) Boiling point
c) Melting Point d) Solubility
- Q.5 In distillation, reflux refers to: (CO1)
- a) Returning part of the condensed vapour back to the column
b) Heating the liquid feed
c) Cooling the distillate
d) Filtering the liquid
- Q.6 The q-line is related to: (CO1)
- a) Feed condition (vapour-liquid ratio)
b) Reboiler heat duty
c) Condenser cooling rate
d) Reflux ratio

SECTION-B

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

- Q.7 The top product of distillation column is known as _____. (CO1)
- Q.8 Steam distillation is useful for _____. (CO1)

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- Q.9 The rectification section is the _____ section of the Distillation column. (CO2)
- Q.10 Crystallization is the process of formation of _____ from a solution. (CO3)
- Q.11 Write one industrial application of leaching. (CO3)
- Q.12 Solvent lean phase are known as _____. (CO2)

SECTION-C

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

- Q.13 Differentiate between Distillation and Gas Absorption. (CO1)
- Q.14 Explain Rayleigh's equation. (CO1)
- Q.15 List two advantages and two disadvantages of membrane separation processes. (CO4)
- Q.16 Briefly explains any two types of membrane materials. (CO4)
- Q.17 Explain Miers saturation theory. (CO3)
- Q.18 Define ceramic membranes. List two advantages and two applications. (CO4)
- Q.19 Explain the concept of crystallization. (CO1)
- Q.20 Define Reflux ratio, Total Reflux ratio and its effect on distillation. (CO1)
- Q.21 Explain Flooding and Weeping in distillation column. (CO1)

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