

- Q.28 Describe the mechanism of crystal formation.
- Q.29 Describe about the filtration with diagram.
- Q.30 Explain in detail process of reverse Osmosis.
- Q.31 Write a note on adsorption isotherms
- Q.32 Explain applications of extractions.
- Q.33 Write about the baffle tube crystallization
- Q.34 Explain ideal stages in counter current leaching with block diagram.
- Q.35 Write any 5 differences between distillation and extraction process.

### SECTION-D

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

- Q.36 Write short note on any Two:
- a) Dialysis
  - b) Super saturation
  - c) Nature of adsorbent
- Q.37 Explain spray tower extraction column with neat and clean diagram.
- Q.38 Draw a neat diagram of vacuum crystallizer and explain its construction and working.

No. of Printed Pages : 4                    180553/120553/030553  
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**5th Sem / Chem, P & P**  
**Subject:- Mass Transfer - II**

Time : 3Hrs.                            M.M. : 100

### SECTION-A

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

- Q.1 Distillation is a \_\_\_\_\_ operation.
- a) Solid-liquid
  - b) Gas-liquid
  - c) Liquid-liquid
  - d) Gas-Gas
- Q.2 Distillation is possible only if the solution components are \_\_\_\_\_
- a) Volatile
  - b) Non-volatile
  - c) Both
  - d) None
- Q.3 Moisture removal from a material/compound is known as drying.
- a) True
  - b) False
- Q.4 The component A and B has the same boiling point. Can the separation is done by ordinary separation?
- a) True
  - b) False

Q.5 The process of separating two liquids is known as \_\_\_\_\_.

- a) Distillation
- b) Absorption
- c) Crystallization
- d) None

Q.6 RO is

- a) Reverse osmosis
- b) Reverse organ
- c) Both A & B
- d) None of above

Q.7 In Azeotropic distillation \_\_\_\_\_ remains low.

- a) Heat
- b) Volatility
- c) Relative volatility
- d) None of the mentioned

Q.8 If the reflux is total, minimum stages are used.

- a) True
- b) False

Q.9 The equipment used for extractions are

- a) Mixer settler
- b) Spray tower
- c) Agitated tower
- d) All of above

Q.10 Which of the following is not an application transport in membrane?

- a) Reverse osmosis
- b) Microfiltration
- c) Dialysis
- d) Fraction distillation

## SECTION-B

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

Q.11 Write one equipment used for distillation?

Q.12 Write any one example of crystallization process.

Q.13 Write full form of RO?

Q.14 Write an example of Azeotropic distillation.

Q.15 The function of reverse osmisis is \_\_\_\_\_

Q.16 What is weeping?

Q.17 Solubility curve is a relation between \_\_\_\_\_ and \_\_\_\_\_

Q.18 Write an example of differential extractor.

Q.19 Crystallization refers to the formation of \_\_\_\_\_.

Q.20 Write full form of BET.

## SECTION-C

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

Q.21 Explain mixer settler with construction and working.

Q.22 Write industrial application of absorption.

Q.23 Write a note on Membrane.

Q.24 Derive the Rayleigh Equation.

Q.25 Write about concept of Adsorption operation.

Q.26 Draw and explain solubility Curve.

Q.27 Discuss the Roault's Law, Dalton's Law.