

## CH2407 PROCESS EQUIPMENT DESIGN II

L T P C      0 0 3 2

(All Tables/Chemical Engineers' Handbook/Data Books/Graph Sheets are permitted during the Examination.)

### AIM

To gain practical knowledge on the shape and drawing of the process equipments

### OBJECTIVES

- To become a design engineers on process equipments design and drawing consideration of the following:-

#### UNIT I 9

Fundamental principles, equations, general design and drawing considerations of cooling towers, evaporators and driers.

#### UNIT II 9

Heat exchangers, condensers and reboilers.

#### UNIT III 9

Distillation columns- sieve tray, and bubble cap tray columns and packed column.

#### UNIT IV 9

Equipments for absorption and adsorption of gases.

#### UNIT V 9

Equipments for liquid-liquid extraction and solid-liquid extraction.

**TOTAL: 45 PERIODS**

### TEXT BOOKS

1. M.V.Joshi and V.V. Mahajan, "Process Equipment Design", MacMillan India Ltd.
2. S.D.Dawande, "Process Design of Equipments", Central Techno Publications, Nagpur, 2000.

### REFERENCES

1. Indian Standard Specifications IS-803, 1962; IS-4072, 1967; IS-2825, 1969. Indian Standards Institution, New Delhi.
2. R.H. Perry, "Chemical Engineers' Handbook", McGraw-Hill.
3. W.L.McCabe, J.C.Smith and Harriet, "Unit Operation of Chemical Engineering", McGraw-Hill.
4. Robert Treybal, "Mass Transfer Operations", McGraw-Hill.
5. J.M. Coulson and J.Richardson, "Chemical Engineering", vol. 6, Asian Books Printers