

## PRODUCTION PLANNING AND CONTROL (PROFESSIONAL ELECTIVE-III)

Course Code:15ME1130

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### Pre requisites:

Industrial Management.

### Course Outcomes:

At the end of the Course, the Student will be able to:

- CO 1** Explain the functions of production, planning and control.
- CO 2** Analyze the scope of Forecasting principles and its techniques.
- CO 3** Discuss the function of inventories and its relevant cost technique methods.
- CO 4** Outline the procedural activities of routing and scheduling.
- CO 5** Generate planning and control techniques, explain the functions of dispatching and follow-up activities.

### UNIT-I (8 Lectures)

#### INTRODUCTION:

Definition – effects and advantages of PPC – functions of production planning and control – need of PPC from system point of view

### UNIT-II (10 Lectures)

#### FORECASTING:

Importance of forecasting – types of forecasting – general principles of forecasting – forecasting techniques – qualitative methods and quantitative methods

### UNIT-III (12 Lectures)

#### INVENTORY MANAGEMENT:

Functions of inventories – relevant inventory costs – ABC analysis

– VED analysis – EOQ deterministic models (without shortages) – Inventory control systems – P-Systems and Q-Systems. Introduction to MRP & ERP, LOB (Line of Balance), JIT inventory and Japanese concepts

#### **UNIT-IV**

**(10 Lectures)**

**ROUTING:** Definition – routing procedure – route sheets – bill of material – factors affecting routing procedure -PERT, CPM

**SCHEDULING:** Definition – difference with loading and scheduling policies – techniques of scheduling and standard scheduling methods.

#### **UNIT-V**

**(10 Lectures)**

##### **PLANNING AND CONTROL TECHNIQUES:**

Line balancing, aggregate planning, chase planning, expediting, controlling aspects

**DISPATCHING:** Definition – activities of dispatcher – dispatching procedure

**FOLLOW UP:** Definition – reason for existence of functions and types of follow up

##### **TEXT BOOK:**

K.C. Jain & L.N. Agarawal, “Production Planning and Control and Industrial Management”, 5<sup>th</sup> Edition, Khanna publications, 2002.

##### **REFERENCES:**

1. P Rama Murthy, “Production and Operations Management”, 1<sup>st</sup> Edition, New Age, 2002.
2. Baffa & Rakesh Sarin, “Modern Production / Operations Management”, 8<sup>th</sup> Edition, John Wiley & Sons, 2002.
3. S L Narasimhan, Mc Leavey, Billington, “Production Planning and Inventory Control”, 2<sup>nd</sup> Edition, PHI, 2002.
4. M.Mahajan, “Industrial Engineering and Production Management”, 3<sup>rd</sup> Edition, Dhanpat Rai & co, 2006.