

PRODUCTION PLANNING AND CONTROL (Elective – I)

Course Code: 13ME1128

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Pre requisites: Industrial Engineering and Management.

Course Educational Objectives:

To make the student

- ❖ To introduce to various inherent concepts of production systems, planning systems and control systems of Manufacturing Industry.
- ❖ To gain knowledge in preparation of process planning sheets for the product.
- ❖ To maintain proper knowledge in inventory control methods.

Course Outcomes:

- ❖ To understand the functions of production, planning and control.
- ❖ To know about the different types of production.

UNIT-I

(10 Lectures)

Introduction - Definition – Objectives of production planning and control – functions of production planning and control – elements of production control – types of production – organization of production planning and control department

UNIT-II

(08 Lectures)

Forecasting – Importance of forecasting – types of forecasting, their uses– general principles of forecasting– forecasting techniques – qualitative methods and quantitative methods.

UNIT-III

(13 Lectures)

INVENTORY MANAGEMENT:

Functions of inventories – relevant inventory costs – ABC analysis – VED analysis – EOQ model – Inventory control systems – P-Systems and Q-Systems.

Introduction to MRP & ERP, LOB (Line of Balance), JIT inventory, and Japanese concepts, Introduction to supply chain management.

UNIT-IV

(13 Lectures)

ROUTING :

Definition – routing procedure – route sheets – bill of material – factors affecting routing procedure. scheduling – definition – difference with loading ,scheduling policies – techniques, standard scheduling methods.

UNIT-V

(13 Lectures)

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

Dispatching – activities of dispatcher – dispatching procedure – follow up – definition – reason for existence of functions – types of follow up, applications of computer in production planning and control.

TEXT BOOKS:

1. Samuel Eilon, “*Elements of Production Planning and Control*”, 1st Edition, Universal Publishing Corp., 1999.

REFERENCES:

1. P Rama Murthy, “*Production and Operations Management*”, 1st Edition, New Age, 2002.
2. Baffa & Rakesh Sarin, “*Modern Production / Operations Management*”, 8th Edition, John Wiley & Sons, 2002.
3. S.N. Chary, “*Operations Management*”, 1st Edition, TMH, 1996.
4. Joseph Monks, “*Operations Management Theory and Problems*”, 3rd Edition, McGraw-Hills,1987.
5. S L Narasimhan, McLeavey, Billington, “*Production Planning and Inventory Control*”, 2nd Edition, PHI, 2002.
6. John E. Biegel, “*Production Control A Quantitative Approach*”, 1st Edition, 1963.

