

**SOS POLITICAL SCIENCE AND
PUBLIC ADMINISTRATION**

MBA HRD 201

**SUBJECT NAME:
FUNCTIONAL MANAGEMENT**

**TOPIC NAME: PRODUCTION PLANNING AND
CONTROL**

MEANING:

- ▶ Production planning and control is an important task of Production Manager. It has to see that production process is properly decided in advance and it is carried out as per the plan. Production is related to the conversion of raw materials into finished goods. This conversion process involves a number of steps such as deciding what to produce, how to produce, when to produce, etc. These decisions are a part, of production planning. Merely deciding about the task is not sufficient.
- ▶ The whole process should be carried out in a best possible way and at the lowest cost. Production Manager will have to see that the things proceed as per the plans. This is a control function and has to be carried as meticulously as planning. Both planning and control of production are necessary to produce better quality goods at reasonable prices and in a most systematic manner.

- ▶ Production planning is the function of looking ahead, anticipating difficulties to be faced and the likely remedial steps to remove them. It may be said to be a technique of forecasting ahead every step in the long process of production, taking them at a right time and in the right degree and trying to complete the operations at maximum efficiency. Production control, on the other hand, guides and directs flow of production so that products are manufactured in a best way and conform to a planned schedule and are of the right quality. Control facilitates the task of manufacturing and see that everything goes as per the plans.
- ▶ **Goldon B. Carson:**
- ▶ “Production planning and control involves generally the organization and planning of the manufacturing process. Specifically, it consists of the planning of the routing, scheduling, dispatching and inspection, co-ordination and the control of materials, methods, machines, tooling and operating times. The ultimate objective is the organization of the supply and movement of materials and labor, machine utilization and related activities, in order to bring about the desired manufacturing results in terms of quantity, time and place.”

▶ **James L. Lundy:**

- ▶ “Basically, the production control function involves the co-ordination and integration of the factors of production for optimum efficiency. Overall sales orders or plans must be translated into specific schedules and assigned so as to occupy all work centers but overload none. The job can be done formally in which case elaborate charting and filing techniques are used ; or it can be done informally, with individuals’ thoughts and retention there of supplanting tangible aids.”

▶ **Charles A. Koepke:**

- ▶ “Production planning and control is the coordination of a series of functions according to a plan which will economically utilize the plant facilities and regulate the orderly movement of goods through the entire manufacturing cycle, from the procurement of all materials to the shipping of finished goods at a predetermined rate.”

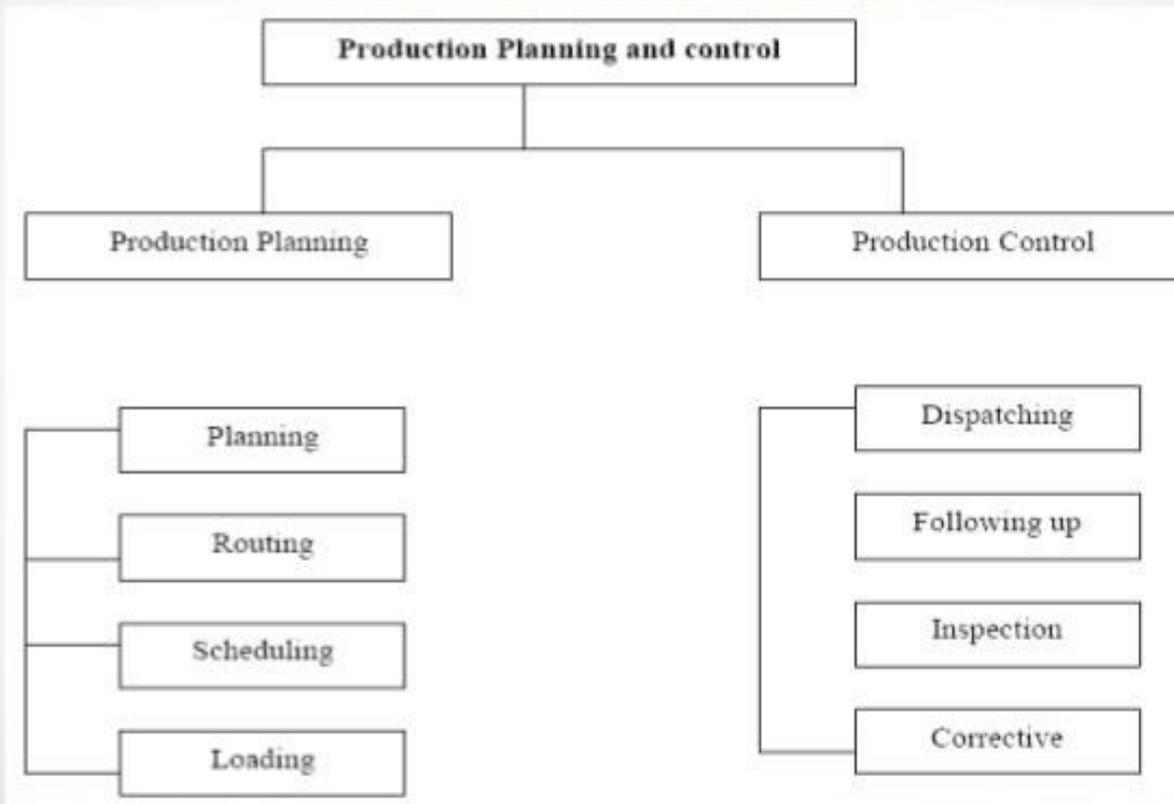
CHARACTERISTICS OF PRODUCTION PLANNING AND CONTROL:

1. It is the planning and control of manufacturing process in an enterprise. The questions like—What is to be manufactured? When it is to be manufactured? How to keep the schedule of production etc.? —are decided and acted upon for getting good results.
 2. All types of inputs like materials, men, machines are efficiently used for maintaining efficiency of the manufacturing process.
 3. Various factors of production are integrated to use them efficiently and economically.
 4. The manufacturing process is organized in such a way that none of the work centers is either overworked or under worked. The division of work is undertaken very carefully so that every available element is properly utilized.
 5. The work is regulated from the first stage of procuring raw materials to the stage of finished goods.
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Principles of PPC

1. Types of production determines the kind of production planning & control
2. Time is common denominator for all scheduling activities
3. The size of the plant has relatively little to do with the type of PPC system needed
4. The highest efficiency in production is obtained by manufacturing the required quantity of a product

PPC : PROCESS



OBJECTIVES OF PRODUCTION PLANNING AND CONTROL:

▶ **Production Planning:**

1. To determine the requirements for men, materials and equipment.
 2. Production of various inputs at a right time and in right quantity.
 3. Making most economical use of various inputs.
 4. Arranging production schedules according to the needs of marketing department.
 5. Providing for adequate stocks for meeting contingencies.
 6. Keeping up-to-date information processes.
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▶ **Production Control:**

1. Making efforts to adhere to the production schedules.
 2. Issuing necessary instructions to the staff for making the plans realistic.
 3. To ensure that goods produced according to the prescribed standards and quality norms.
 4. To ensure that various inputs are made available in right quantity and at proper time.
 5. To ensure that work progresses according to the predefined plans.
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MAIN ELEMENTS OF PRODUCTION PLANNING & CONTROL:

The following are main elements of Production Planning and Control:

1. Routing

- ▶ It is about selection of path or route through which raw materials pass in order to make it into a finished product. The points to be noted while routing process are – full capacity of machines, economical and short route and availability of alternate routing. Setting up time for the process for each stage of route is to be fixed. Once overall sequence are fixed, then the standard time of operations are noted using work measurement technique.

2. Loading and scheduling

- ▶ Loading and Scheduling are concerned with preparation of workloads and fixing of starting and completing date of each operation. On the basis of the performance of each machine, loading and scheduling tasks are completed.
- ▶ According to Kimball and Kimball, scheduling is defined as
- ▶ the determination of the time that should be required to perform the entire series as routed, making allowance for all factors concerned.

3. Dispatching

- ▶ Dispatching is the routine of setting productive activities in motion through the release of orders and instructions, in accordance with previously planned time and sequence, embodied in route sheet and schedule charts. It is here the orders are released.

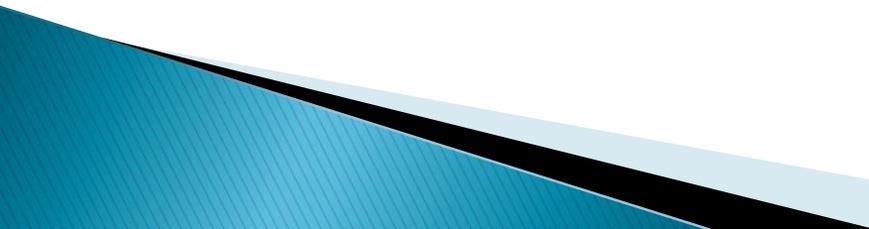
4. Expediting / Follow-up

- ▶ It is a control tool which brings an idea on breaking up, delay, rectifying error etc., during the progress of work.

5. Inspection

- ▶ Inspection is to find out the quality of executed work process.

6. Corrective

- ▶ At evaluation process, a thorough analysis is done and corrective measures are taken in the weaker spots.
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Stages of Production Planning & Control:

Production Planning & Control is done in three stages namely,

- ▶ Pre-planning
- ▶ Planning
- ▶ Control.

Stage 1: Pre-Planning

- ▶ Under this phase of production planning, basic ground work on the product design, layout design and work flow are prepared. The operations relating to the availability scope and capacity of men, money materials, machines, time are estimated.

Stage 2: Planning

- ▶ This is a phase where a complete analysis on routing, estimating and scheduling is done. It also tries to find out the areas of concern for short time and long time so that prominent planning can be prepared.

Stage 3: Control

- ▶ Under this phase, the functions included are dispatching, follow up, inspection and evaluation. It tries to analyze the expedition of work in progress. This is one of the important phases of the Production Planning and Control.

IMPORTANCE OF PRODUCTION PLANNING AND CONTROL:

- ▶ **Better Service to Customers:** Production planning and control, through proper scheduling and expediting of work, helps in providing better services to customers in terms of better quality of goods at reasonable prices as per promised delivery dates. Delivery in time and proper quality, both help in winning the confidence of customers, improving relations with customers and promoting profitable repeat orders.
- ▶ **Fewer Rush Orders :** In an organization, where there is an effective system of production planning and control, production operations move smoothly as per original planning and matching with the promised delivery dates. Consequently, there will be fewer rush orders in the plant and less overtime than, in the same industry, without adequate production planning and control.
- ▶ **Better Control of Inventory :** A sound system of production planning and control helps in maintaining inventory at proper levels and, thereby, minimizing investment in inventory. It requires lower inventory of work-in-progress and less finished stock to give efficient service to customers. It also helps in exercising better control over raw-material inventory, which contributes to more effective purchasing.
- ▶ **More Effective Use of Equipment :** An efficient system of production planning and control makes for the most effective use of equipment. It provides information to the management on a regular basis pertaining to the present position of all orders in process, equipment and personnel requirements for the next few weeks. The workers can be communicated well in advance if any retrenchment, lay-offs, transfer, etc. is likely to come about. Also, unnecessary purchases of equipment and materials can be avoided. Thus, it is possible to ensure proper utilization of equipment and other resources.

- ▶ **Reduced Idle Time :** Production planning and control helps in reducing idle time i.e. loss of time by workers waiting for materials and other facilities; because ensures that materials and other facilities are available to the workers in time as per the production schedule. Consequently, less man-hours are lost, which has a positive impact on the cost of production.
- ▶ **Improved Plant Morale :** An effective system of production planning and control co-ordinates the activities of all the departments involved in the production activity. It ensures even flow of work and avoids rush orders. It maintains healthy working conditions in the plant thus, there is improve plant morale as a by-product.
- ▶ **Good public image:** A proper system of production planning and control is helpful in keeping systematized operations in an organization. Such an organization is in a position to meet its orders in time to the satisfaction of its customers. Customers satisfaction leads to increased sales, increased profits, industrial harmony and ultimately good public image of the enterprise .
- ▶ **Lower capital requirements:** Under a sound system of production planning and control, everything relating to production is planned well in advance of operations. Where, when and what is required in the form of input is known before the actual production process starts. Inputs are made available as per schedule which ensures even flow of production without any bottlenecks. Facilities are used more effectively and inventory levels are kept as per schedule neither more nor less. Thus, production planning and control helps, in minimizing capital investment in equipment and inventories.