

IV B.Tech. II Semester Supplementary Examinations, July -2005
PRODUCTION PLANNING AND CONTROL
(Mechanical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the advantages of Production Planning and Control.
2. Explain how the following two characteristics of a product help the manufacture to face the competition in the market.
 - (a) Aesthetic aspect.
 - (b) Functional aspect.
3.
 - (a) Explain any two quantitative methods of forecasting.
 - (b) Explain the characteristics that a good forecasting system should possess.
4. An electrical housing has an annual usage rate of 75,000 units / year, an ordering cost Rs.800 and annual carrying charge of 15.4% of the unit price. Delivery lead time is 2 weeks. Determine the optimal operating doctrine.
5.
 - (a) Define P - System ? When you recommend this for controlling inventory?
 - (b) How is the reorder point determined ? What is the significance of the reorder points to the production manager ?
6.
 - (a) Explain master scheduling with suitable example.
 - (b) Explain how graphs are useful for scheduling and control problems.
7. When the company is manufacturing a Product whose demand is fluctuates in the market . What strategies it has to adopt to match capacity and demand. Explain.
8.
 - (a) What is meant by Dispatching?
 - (b) Enumerate the duties of a Dispatcher.
 - (c) Give a list of records maintained by Dispatching Department?

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1. Explain in detail the “Planning” stage.
2. How is the design of a new product finalized? Explain.
3. Explain methods of forecasting for established products.
4. (a) Explain the selective control technique that is used for inventory control of spare parts.
(b) Explain the various costs of inventory control.
5. (a) What are the Limitations of Economic Batch Quantity (EBO) Production Model ?
(b) A Product is manufactured on a machine. The cost of Production, demand, etc are given below :
Fixed cost per unit : Rs. 30
Variable cost Per unit : Rs. 0.10
Percentage of Charge for interest, taxes, insurance, storage etc. 50%
Production rate 100000 units per year
Demand Rate 10000 units per year
Determine the economic lot size manufacturing quantity.
6. (a) Explain master scheduling with suitable example.
(b) Explain how graphs are useful for scheduling and control problems.
7. What is Aggregate Planning? How does it differ from Long range Planning and short period planning. Explain with an example.
8. How does dispatching in continuous (flow) system differ from dispatching in intermittent (order) system ?

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1. (a) Explain the important steps in attaining an 'End product' of a company.
(b) Explain the specifications contained in working drawings.
2. With reference to preplanning stage of production explain the following two terms with a real world example of your own.
(a) Marketability of product.
(b) Competitiveness of a product.
3. (a) What are the requirements of a good forecasting method?
(b) What are the steps in forecasting process?
4. (a) Explain the reasons for maintaining the inventory. .
(b) Explain the various components of inventory carrying costs.
5. (a) Define Line of Balance (LOB). Explain the Produce of Banking a line.
(b) What are the requirements need to be satisfied the LOB
6. (a) Define Loading.
(b) How loading is differ from scheduling and explain by using a Gantt chart.
7. (a) Explain forward scheduling and back ward scheduling.
(b) List out the guide lines for aggregate scheduling
(c) Explain the different costs associated with aggregate planning.
8. (a) What is meant by Dispatching?
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1. (a) Define:
 - i. Production
 - ii. Production Planning
 - iii. Production Planning and Control
 (b) Write about the Principles of Production Planning and Control.
2. Explain the differences between process and product focused organizations.
3. (a) Define forecasting. Explain the purpose of demand forecasting.
 (b) Explain the various causal methods of forecasting.
4. Explain the following with examples.
 - (a)) Manufacturing inventories
 - (b) Distribution inventories
 - (c) Anticipated inventories
5. (a) Compare of Fixed order Quantity (Q System) and Fixed Period Order (P-System) System and Explain their applicability.
 (b) What do you mean by Fixed Periodic Review System and explain its characteristics of the System.
6. (a) Explain the terms forward scheduling and backward scheduling.
 (b) Explain with a neat sketch how Gantt chart is used to show schedules. Explain the symbols used in drawing Gantt chart.
7. The owner of machine shop has 4 machines available. Assign the jobs for the day. 5 jobs are offered with the expected profit in Rs. for each machinist is given below.

	job				
	A	B	C	D	E
Machinist 1	6.2	7.8	5	10.1	8.2
2	7.1	8.4	6.1	7.3	5.9
3	8.7	9.2	11.1	7.1	8.1
4	4.8	6.4	8.7	7.7	8

Determine the optimum assignment to maximize the profit. Which job should be rejected?

8. (a) What is meant by Dispatching?
- (b) Enumerate the duties of a Dispatcher.
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