

IV B.Tech I Semester Supplementary Examinations, February 2007
PRODUCTION PLANNING AND CONTROL
 (Common to Mechanical Engineering, Mechatronics and Production Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
 All Questions carry equal marks

1. Explain in detail the “Planning” stage. [16]
2. (a) Explain the type of Production “Production for stock”.
 (b) Explain the main factors to determine the place of Production Planning and Control in an organization. [6+10]
3. What are seasonal variations, why they are important for sales forecasting? [16]
4. Define the following terms:
 - (a) Order point
 - (b) Lead-time
 - (c) Reorder level
 - (d) Maximum stock level
 - (e) Minimum stock level
 - (f) Safety stock
 - (g) Service level
 - (h) Average stock level [2×8]
5. (a) Define P - System ? When you recommend this for controlling **inverntroy**?
 (b) How is the reorder point determined ? What is the significance of the reorder points to the production manager? [4+12]
6. Draw a schedule chart and a load chart for the following data

Jobs	Time in Hrs on Machines	
	x	y
A	2	4
B	5	2
C	1	3

Give order of machine is first on x and then on y. [16]

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. [5+6+5]

8. (a) What is meant by Dispatching?
(b) Enumerate the duties of a Dispatcher.
(c) Give a list of records maintained by Dispatching Department? [4+8+4]

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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. [8+8]
2. List the common information and data contained in a process sheet. Explain briefly. [16]
3. (a) Explain the importance of forecasting in an industry.
(b) List and explain the qualitative methods of forecasting. [8+8]
4. (a) What is inventory ? Explain different types of inventories.
(b) What are symptoms that indicate poor inventory management in an organization. [8+8]
5. (a) What factors do you consider in fixing the maximum and minimum stock levels ?
(b) Why do we balance the conflicting objectives of minimizing cost and maximizing service levels in inventory models
(c) What are some of the benefits and costs associated with safety stock? [4+12]
6. (a) Define routing ?
(b) Discuss different routing procedure. [4+12]
7. Explain the following standard scheduling techniques
(a) Master scheduling
(b) Perpetual scheduling
(c) Order scheduling
(d) Loading by scheduled periods [16]
8. Explain the procedure to be followed by workman in securing a job through dispatch system. [16]

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1. Explain the Production Planning and Control cycle. [16]

2. Explain the following with examples.
 - (a) Modular design
 - (b) Design for maintenance
 - (c) Aesthetic Design [6+5+5]

3. (a) The demand for plastic goods is 300 units and 350 units for the September and October respectively, using 200 units as the demand for September, compute the forecast for the month of November. Assume smoothing constant as 0.7
- (b) What is meant by mean absolute deviation, what is its significance? [8+8]

4. (a) Explain the reasons for maintaining the inventory. .
- (b) Explain the various components of inventory carrying costs. [8+8]

5. (a) Explain, in detail the procedural steps involved in MRP.
- (b) State and explain the functions served by MRP. [8+8]

6. What are the different operation of Routing? Explain. [16]

7. (a) What is scheduling? What are the different scheduling methods?
- (b) What is aggregate planning? Explain the pure strategies of aggregate planning? [8+8]

8. Explain the role of computers in production planning and control ? [16]

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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. [6+10]
2. What is "Process Planning sheet"? What is its significance? Explain it with an example. [16]
3. (a) What are different methods of sales forecasting?
 (b) Discuss the merits and limitations of sales forecasting method. [8+8]
4. (a) What are the functions of inventory management?
 (b) Explain the concept of Economic Order Quantity (EOQ). [8+8]
5. (a) What is Just-In-Time (JIT) inventory system.
 (b) What are the elements of Just - In - Time (JIT) inventory system. [4+12]
6. Draw a schedule chart and a load chart for the following data

Jobs	Time in Hrs on Machines	
	x	y
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Give order of machine is first on x and then on y. [16]

7. List out and explain various methods of increasing and decreasing capacity of a plant to match the demand during Aggregate Planning. [16]
8. (a) What is meant by Dispatching?
 (b) Enumerate the duties of a Dispatcher.
 (c) Give a list of records maintained by Dispatching Department? [4+8+4]
