

[Total No. of Questions - 7] [Total No. of Printed Pages - 2]
(2066)

16421(J)

M. Tech 2nd Semester Examination
Production Planning and Control
PE-209

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt any five questions. Answer should be precise. All question carry equal marks.

1. (a) Define production and production system. Differentiate between "Job Order" Production and "Batch Production". (10)
- (b) How does scheduling in Job shops differ from High volume continuous systems? Explain in detail. (10)
2. (a) Differentiate between dispatching and expediting and point out to what extent these differences should lead to a clear and rigid demarcation of responsibilities between dispatching and expediting. (10)
- (b) There are five jobs, each of which is to be processed through three machines A, B and C in the order ABC. Processing times in hours are:

Job	A	B	C
1	3	4	7
2	8	5	9
3	8	1	5
4	5	2	6
5	4	3	8

How should the jobs be loaded in order to minimize the total elapsed time? (10)

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2

16421

3. (a) What is the meaning of Aggregate plan? What are the objectives of aggregate plans? What are the inputs and the nature of the outputs? (10)
- (b) Discuss the contribution of Henry Ford and Taguchi to operations management. (10)
4. (a) What is forecasting? List the methods of forecasting. How does it help in planning? (10)
- (b) A company requires 5000 units per year which costs Rs. 10 per unit. Ordering cost is estimated be Rs. 100 per order, carrying costs are 15% per annum of average inventory. The supplier is prepared to give 2% discount in price if the company purchases 10,000 units or more but less than 20,000 lot size. A further discount of 1% in price of original value is available on the order of 20,000 or more units. Find economical lot size and the minimum total cost. (10)
5. (a) Explain the plant configuration and discuss various automated production lines. (10)
- (b) Discuss the classification of facilities layout and explain any two principles of facilities layout. (10)
6. (a) Explain characteristics of Job shop production system. (10)
- (b) Give internal organization chart for Job shop production system. (10)
7. Write the short notes on following:
 - (a) Computer aided process planning.
 - (b) Master production schedule.
 - (c) Gantt Chart.
 - (d) Batch Production. (20)