(i) **Printed Pages : 3** Roll No. ....

(ii) **Questions** : 9 **Sub. Code :** | 1 | 7 | 8 | 3 | 2 |
    Exam. Code : | 0 | 0 | 1 | 5 |

Bachelor of Commerce 5th Semester
(2124)
PRODUCTION AND OPERATION MANAGEMENT
Paper : BCM–504

Time Allowed : Three Hours] [Maximum Marks : 80

Note :—(1) Attempt any **FOUR** parts each carrying **5** marks from Section-A.

(2) Attempt any **TWO** questions each from Section-B and Section-C carrying **15** marks each.

SECTION—A

1. Attempt any **four** parts :

   (a) Give the objectives of production and operations management.

   (b) What are the principles of a good facility layout ?

   (c) What is logistic management ?

   (d) Define work study.

   (e) Total consumption of material per annum 9000 units

   Carrying cost is 30% of average inventory, ordering cost is Rs. 100 per order.

   Unit Cost is Rs. 20. Calculate EOQ and total cost.

(f) There are six jobs, each of which must go through two machines P and Q in the order PQ, the processing times (in hours) are given below :

Machine	Job(s)					
	A	B	C	D	E	F
P	8	10	6	7	9	14
Q	5	9	10	8	12	8

Find the sequence that minimizes the total elapsed time T. Also calculate the total idle time for the machines in this period.

SECTION—B

2. Do you think that demand forecasting is essential for an organization ? Explain the various methods of demand forecasting.

3. What do you mean by Production and Operations Management ? Explain various functions of production and operations management.

4. What is production planning and control ? Explain the various techniques of production planning and control.

5. A project consists of the following activity and estimate :

Activity	Optimistic time	Most likely time	Pessimistic time
1-2	6	6	24
1-3	6	12	18
1-4	12	12	30
2-5	6	6	6
3-5	12	30	48
4-6	12	30	42
5-6	18	30	54

(a) Draw Network.

(b) Determine critical path and their variances.

(c) Find earliest and latest expected times to reach each node.

SECTION—C

6. What is supply chain management ? Discuss various components of supply chain management.

7. What is motion study ? Discuss the various techniques of motion study.

8. A Hardware Store procures and selling in hardware items, the following information is available, Annual Demand = 8000 units, Cost per order = 180 per order, Carrying cost = 10% of the average inventory value.

   The items can be purchased according to following schedule :

Lot size	Price (Rs.)
1-999	22.00
1000-1499	20.00
1500-1999	19.00
2000 & above	18.50

   Determine the best lot size.

9. What are the principles of logistics management ? Explain the issues and challenges for logistics management in India.