

MBA-1 Sem.-2 MBA (BEPF)/MBA (DM)/MBA (EM)/MBA (PPM) Examination
 EPF-204/DM-204/EM-204/PP-204

Production & Operation Management

May 2022

Time : 2-00 Hours]

[Max. Marks : 50

- Instructions: (1) This paper contains FIVE questions.
 (2) All questions are compulsory.
 (3) Question No.2, 3, 4 have internal options.
 (4) Figures in the right side in parenthesis indicate marks.

1

- A A Product is being made in an assembly line. Production time per day is 10 hours. 60 (7) products are required per day. From the data, Find the balance that minimizes the number of workstations, subject to cycle time and precedence constrains and also find Efficiency. (Primary Rule: Task with the most followers, Secondary Rule: Task with longest time).

Task	Task time (Minutes)	Tasks that must precede
A	3	-
B	4	-
C	2	A
D	5	B
E	4	C
F	8	E
G	2	D
H	4	F
I	6	H,G

- B Complete the following table. Lead time for the item is 1 week, and the order quantity is of (3) 200 units. Safety Stock should be of 25 units at any point of time.

	1	2	3	4	5
Gross requirement	50	250	100	50	100
Scheduled Receipt		250			
Projected Available (75)					
Net requirement					
Planned order receipt					
Planned order release					

P.T.O

2

N 261-2

A From the data given below, Calculate Total Cost using Least Cost Method. (4)

	1	2	3	4	Supply
A	12	5	2	10	30
B	7	9	15	4	45
C	3	13	14	8	25
Demand	20	35	30	15	

B (6)

Answer the following questions: 3 marks each

- A While making Make or Buy Decisions, Write any 4 Factors favoring 'Buying' Decisions.
- B Explain any three Dimensions of Service Quality
- C Strategic Purchasing vs. Tactical Purchasing

OR

2

A From the data given below, Calculate Total Cost using North West Corner Cell Method. (4)

	1	2	3	4	Supply
A	12	5	2	10	30
B	7	9	15	4	45
C	3	13	14	8	25
Demand	20	35	30	15	

B Answer the following questions: 2 marks each (6)

- A While making Make or Buy Decisions, Write any 4 Factors favoring 'Making' Decisions.
- B Explain any three Dimensions of Product Quality
- C What do you understand by the term 'Maverick Buying'?

3

Answer the following questions: 2 marks each (10)

- A There are 10 'R's (Right) in Parameters of Purchasing. Explain any 2.
- B Name any 4 of the 7 QC Tools.
- C Just in Time vs. Just in Case
- D Name the types of flows and their directions in Supply Chain Management.
- E How would you reduce lead time?

OR

Answer the following questions: 2 marks each (10)

- A Name any four Supplier Selection Criteria.
- B What do you understand by Six Sigma?
- C Name any 4 types of wastes of Quality Management/JIT.
- D Explain the meaning of Supply Chain Management.
- E Takt time vs Cycle time

4

- A PQR Ltd is an FMCG Company. The opening Stock for Product A is of 1200 units. The Closing Stock is of 500 units. Throughout the year, 2500 units of Product A were Purchased. The Other Direct expenses were worth Rs 12000 related to Product A. The Cost of Purchase for Product A was Rs 60 per Unit. Calculate the Inventory Turnover Ratio for the products A. (3)

- B For this Data please find value of Safety Stock. The value of k is 1.28 (90% service level). (7)

Month	Sales
Jan	200
Feb	300
Mar	180
Apr	250
May	400
June	220
July	360
Aug	420
Sept	290
Oct	260
Nov	410
Dec	310

Delivery	Lead Time (Day)
1	7
2	11
3	13
4	8
5	14
6	11
7	16
8	6
9	10
10	14

OR

- A Annual usage is 1200. Purchase cost per unit is Rs 10. Order cost is Rs20 per order. Holding cost is 10% p.a.u. of purchase cost per unit. Calculate the minimum total cost and optimum order Quantity with a discount of 2% given on orders of 350 and over. (4)
- B XYZ ltd makes 5000 units of a part at the cost of Rs 1000 each. The variable cost per unit is Rs 800 and Remaining are fixed cost. Another Firm offers to supply 5000 units of same part for Rs 700 each. On accepting this offer, XYZ ltd can save 50% of the fixed cost. Should XYZ accept the offer and purchase or It should continue Making it? (3)
- C XYZ ltd makes various products but all of its products are made of component Y. The Annual usage of component Y is 1200 units. For each Order, the placement cost is 90 rupees for the same component while it costs 15 rupees to store each component Y. The minimum lead time is of 2 days while the maximum lead time is of 4 days. The minimum usage of the component in a day is of 5 units while maximum usage of the component is of 15 units. Calculate Following data for Component Y. I. Economic Order Quantity, II. Reorder Level, III. Minimum Level. (3)

5

- A Calculate the Closing Stock using LIFO method. (4)

Date	Particulars	Units	Cost/unit
1	Purchased	500	5
6	Purchased	300	5.1
8	Issued	600	
10	Purchased	400	5.2
12	Issued	300	
16	Purchased	500	5.1
20	Issued	200	

- B Answer the following questions (2 Marks Each)
 - 1) What do you understand by Bullwhip Effect? (6)
 - 2) What do you understand by Theory of Constraints?
 - 3) What are the inputs of Materials Requirement Planning?

— X —