



## MEASI INSTITUTE OF MANAGEMENT CHENNAI-14

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### OPERATIONS MANAGEMENT (PMF2L)

#### QUESTION BANK

##### UNIT I

1. What is operations management?
2. List out production system concepts?
3. Give the scope of production and operations management?
4. List out the characteristics of modern Operations Management?
5. Discuss some latest trends in Manufacturing operations
6. What is Product Design?
7. What is Process Design?
8. Define production system? Discuss in detail.
9. What is production management? What is operations management? Bring out the differences between the two?
10. Explain the Nature of Production / Operations Management. State the Function of Production / Operations Manager
11. Explain Capacity Planning in detail.
12. When do we do a make or buy decision? List and explain the factors influencing make or buy decision.
13. What is a design capacity? How is it different from System capacity?
14. List and discuss some important charts used in Operations management.

##### UNIT II FACILITY DESIGN

1. What is meant by Plant Location?
2. State the advantages of Village Site and the advantages of City site.
3. State the principles of Plant layout
4. Mention any four types of Layout?
5. What is Master Production Scheduling?
6. Distinguish between a flow shop and a job shop
7. What is the importance of material handling in a plant layout?
8. Discuss the principles of material handling.
9. Two layout alternatives are shown below. The facility's products, their travel between departments and the distances between departments for



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each layout alternative are also shown below. The layout alternative that minimizes the monthly product travel through the facility has to be determined.

Layout A					Layout B				
8	4	10	2	5	7	1	9	6	3
3	7	1	9	6	4	10	2	5	8

Department movement combination	Distance between departments (feet)		Department movement combination	Distance between departments (feet)	
	Layout A	Layout B		Layout A	Layout B
1-5	30	30	3-9	30	20
1-7	10	10	4-5	10	30
1-9	10	10	4-7	10	10
1-10	10	10	4-10	10	10
2-5	10	10	5-6	10	10
2-6	20	20	6-9	10	10
2-10	10	10	7-8	20	50
3-6	40	10	8-10	20	30

10. Explain Product layout, process layout, fixed position and group layout in detail.
11. Write a note on layout design.
12. Explain what Materials Requirement Planning is in detail. What are the fundamental principles of material handling system? Briefly state their salient features.
13. Define Ergonomics. Why is it important in job design?
14. What are the various types of charts used in method study?

**UNIT III INVENTORY CONTROL AND MAINTENANCE**

1. Explain what is meant by the Economic Order Quantity (EOQ) model used in inventory control.
2. What is scheduling? What are the different types of production systems?



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3. Explain how EOQ and ABC analysis method improves inventory control. What are its advantages and disadvantages?
4. What is MRP in operations management? What is its significance in Inventory control?
5. What is JIT? Explain how it impacts the supply chain management of an organization?
6. What are the different types of maintenance? Bring out the difference between preventive maintenance and breakdown maintenance.
7. What do you understand by replacement of machinery and equipment?
8. Differentiate between individual replacement and group replacement.
9. Discuss in detail the preventive maintenance procedure.
10. Explain Breakdown Time Distribution.
11. What are the inventory models used in Operations Management? Discuss in detail any one inventory model in detail.
12. List and explain the ABC analysis tool of inventory control.
13. What is EBQ and how is it different from EOQ?
14. Calculate EOQ with the following data:  
Annual requirements 800 units  
Ordering Cost (per order) Rs. 50  
Carrying Cost (per unit) Rs. 100
15. A company purchases a set of 500 goods, the cost of each of the item is taken at Rs. 50, while total cost associated with ordering is taken at Rs. 100. If inventory carrying cost is only 20% of the total unit value, then what amount of money can be saved by ordering the economic order quantity? what is the total cost that is associated with inventory policy that is existing in the company?
16. A supplier has to supply 10000 units of a certain product per day to a customer. He finds that during a production run he can produce 20000 units of product per day. The cost of holding stock for one year is 3 paise and set up cost of a production run is Rs. 20. How frequently should production run be made?
17. The demand for an item is 10000 units per year. Its production rate is 1500 units per month. The holding cost is Rs. 20/unit/year and the set-up cost is Rs. 800 per set up. The shortage cost is Rs. 1000 per unit per year.



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Find the EOQ, maximum shortage and total minimum production inventory cost.

18. The demand for a certain item is 50 units per year. Unsatisfied demand causes a shortage cost of Rs. 0.45 per unit per short period. The ordering cost for purchase is Rs. 20 per order and the holding cost is 15% of average inventory valuation per year. Item cost is Rs. 5 per unit. Find the EOQ, the shortage inventory and the minimum cost.

### UNIT IV DESIGN OF WORK SYSTEMS AND QUALITY CONTROL

1. Define the term Quality Control?
2. What is SQC?
3. What is TQM?
4. What are the components of standard time.?
5. What do you mean by Acceptance Sampling?
6. State the types of Control Charts?
7. List the Control charts for variables?
8. List the Control charts for Attributes?
9. Define Quality? How it is ensured?
10. Discuss in detail the quality control techniques?
11. Define the term Work Study?
12. Define the term Method Study?
13. What is Work Simplification?
14. What is Work Sampling
15. Define the term Motion Study?
16. What is Time study?
17. What are control charts? Discuss Control charts for attributes and control charts for variables.
18. Discuss in detail the method study procedure
19. What is the purpose of Inspection and quality control?



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20. What is production scheduling? Describe the use of Gantt load chart in scheduling.

### UNIT V SERVICE OPERATIONS MANAGEMENT

1. Discuss the peculiar nature of services.
2. Identify various services we use in our daily lives.
3. Discuss in detail the factors to be considered in choosing a location for a all women fitness centre.
4. Explain production process, manufacturing operation and service operations.
5. Difference between manufacturing and service operations.
6. Draw a service layout for a fast food restaurant in a city centre.
7. What do you understand by service blue printing?
8. Describe the service delivery process in detail with an example.
9. Explain how waiting line method could be used to improve service delivery?
10. What according to are the challenges present in designing service organizations?