

# Supply Chain Digitization (NPTEL)

## Assignment 01

1. Why is the effective flow of information critical in supply chain management?
  - a) It improves customer feedback process.
  - b) It ensures that all stakeholders have real-time data to make informed decisions.
  - c) It minimizes the cost of raw materials by negotiation amongst stakeholders.
  - d) Information does not play any role in the supply chain management.

Ans: It ensures that all stakeholders have real-time data to make informed decisions.

2. Which of the following is NOT a component of a supply chain?
  - a) Suppliers
  - b) Competitors
  - c) Manufacturers
  - d) Retailers

Ans: Competitors

3. In the context of supply chain and value chain, which of the following statements is TRUE?
  - a) Supply chain focuses on operational efficiency, while value chain focuses on competitive advantage.
  - b) Value chain deals exclusively with suppliers, while the supply chain involves customers.
  - c) Both value chain and supply chain are independent and do not interact with each other.
  - d) Supply chain is concerned with cost reduction, while value chain ignores costs.

Ans: Supply chain focuses on operational efficiency, while value chain focuses on competitive advantage.

4. What is the key characteristic of a continuous manufacturing process?
  - a) Flexibility to handle product variations
  - b) High production volume with minimal interruptions
  - c) Assembly of parts at multiple workstations
  - d) Production in small quantities with frequent changeovers

Ans: High production volume with minimal interruptions

5. Which manufacturing process is characterized by the ability to handle low to moderate volumes with moderate variety efficiently?
  - a) Job shop
  - b) Batch production
  - c) Assembly line
  - d) Continuous process

Ans: Batch production

6. Which of the following is NOT considered a primary driver of supply chain performance?
  - a) Customer Satisfaction
  - b) Inventory
  - c) Transportation
  - d) Facilities

Ans: Customer Satisfaction

7. The decision to centralize or decentralize warehouses is part of which supply chain driver?

- a) Information
- b) Inventory
- c) Facilities
- d) Sourcing

Ans: Facilities

8. Choosing between faster but more expensive modes of transport (e.g., air freight) versus slower but cheaper modes (e.g., shipping) reflects a trade-off between:
- a) Facilities and inventory
  - b) Inventory and transportation
  - c) Sourcing and customer satisfaction
  - d) Information and transportation

Ans: Inventory and transportation

9. How does prioritizing efficiency over responsiveness impact a supply chain?
- a) Increases lead times but lowers costs
  - b) Enhances customer satisfaction but raises costs
  - c) Decreases inventory holding cost
  - d) Increases inventory holding cost

Ans: Increases lead times but lowers costs, Decreases inventory holding cost

10. In the context of pricing, what does “economies of scale” refer to?
- a) Offering discounts for bulk purchases to improve supply chain efficiency
  - b) Adopting menu pricing to match customer-specific needs
  - c) Setting prices higher during peak seasons to maximize profits
  - d) Reducing per-unit costs by producing larger quantities

Ans: Reducing per-unit costs by producing larger quantities

11. A plant operates 20 hours per day and the ideal operating speed is 350 units per hour. If it produces 1,60,000 units in a month (30 days), what is the utilization of the plant?

Ans: 0.75- 0.77

12. MaxMove has an average inventory value of \$800,000 at the beginning of the year and \$1,000,000 at the end of the year. During one year, the cost of goods sold (COGS) amounted to \$4,500,000. What is the inventory turnover rate of MaxMove (in days) ?

Ans: 71-73

13. A furniture distributor delivers tables to retail stores. The total tables ordered were 800 and the distributor could only deliver 740 tables. What percent of tables can be delivered on or before the promised delivery date?

Ans: 91-93

14. With respect to Q13, if the distributor delivered tables on time for approx 85.55% of the time for a total of 90 deliveries, how many On- Time deliveries were made?

Ans: 76-78

15. With respect to the example of 3PL discussed in class, if the annual inventory carrying cost is 30% of the unit cost for semi-modern product, which 3PL will be profitable for the company?
- a) Avitruck

- b) Logitruck
- c) Does not affect the decision
- d) None

Ans: Avitruck