

314- Supply Chain Analytics

1. What does Supply Chain Analytics (SCA) primarily focus on?

- A) Managing inventory levels
- B) Optimizing transportation routes
- C) Analyzing and improving supply chain processes
- D) Forecasting consumer demand

Answer: C) Analyzing and improving supply chain processes

2. Which of the following is NOT a flow typically involved in a supply chain?

- A) Material
- B) Money
- C) Energy
- D) Information

Answer: C) Energy

3. What is the significance of analytics in a supply chain?

- A) It helps reduce operational costs
- B) It improves decision-making processes
- C) It enhances supply chain visibility
- D) All of the above

Answer: D) All of the above

4. How does Supply Chain Analytics relate to Operations Management?

- A) It focuses on human resource management
- B) It is primarily concerned with financial analysis

- C) It involves optimizing processes within the supply chain
- D) It deals with marketing strategies

Answer: C) It involves optimizing processes within the supply chain

5. What role does Supply Chain Analytics play in India, as per case studies?

- A) It has no significant impact
- B) It has led to improved efficiency and cost savings
- C) It has increased supply chain complexity
- D) It is not applicable in the Indian context

Answer: B) It has led to improved efficiency and cost savings

6. Which technique is used to determine the best supplier based on weighted criteria?

- A) Linear Programming
- B) Clustering
- C) Goal Programming
- D) Data Envelopment Analysis

Answer: A) Linear Programming

7. What method involves assigning scores to suppliers based on predetermined criteria?

- A) Rating method
- B) Ranking method
- C) Borda Count
- D) Clustering

Answer: A) Rating method

8. Which method ranks suppliers by comparing them pairwise?

- A) Linear Programming
- B) Rating method
- C) Ranking method
- D) Borda Count

Answer: C) Ranking method

9. Borda Count is a method used for:

- A) Rating suppliers based on predetermined criteria
- B) Ranking suppliers by pairwise comparison
- C) Clustering similar suppliers
- D) None of the above

Answer: B) Ranking suppliers by pairwise comparison

10. Clustering in supplier selection analytics involves:

- A) Assigning scores to suppliers
- B) Grouping suppliers based on similarity
- C) Pairwise comparison of suppliers
- D) None of the above

Answer: B) Grouping suppliers based on similarity

11. Transportation Modeling and Analytics:

11. What do transportation models primarily aim to optimize?

- A) Warehouse locations
- B) Vehicle routes
- C) Supplier selection

- D) Inventory levels

- **Answer: B) Vehicle routes**

12. Route planning in transportation modeling involves:

- A) Optimizing warehouse space

- B) Determining the best suppliers

- C) Finding the most efficient paths for goods delivery

- D) Calculating transportation costs

- **Answer: C) Finding the most efficient paths for goods delivery**

13. Transshipment in transportation modeling refers to:

- A) Storing goods temporarily in warehouses

- B) Moving goods from one mode of transportation to another

- C) Selecting the best suppliers

- D) Calculating transportation costs

- **Answer: B) Moving goods from one mode of transportation to another**

14. Shipment schedule optimization involves:

- A) Determining the best time to ship goods

- B) Selecting the most cost-effective suppliers

- C) Optimizing vehicle routes

- D) Calculating transportation costs

- **Answer: A) Determining the best time to ship goods**

15. Flow path optimization in transportation modeling aims to:

- A) Minimize delivery times

- B) Maximize transportation costs

- C) Increase inventory levels
- D) None of the above

- Answer: A) Minimize delivery times

16. What problem does the warehouse location problem address?

- A) Determining the optimal layout of a warehouse
- B) Selecting the best suppliers
- C) Finding the most efficient routes for goods delivery
- D) Deciding where to locate warehouses for maximum efficiency

- Answer: D) Deciding where to locate warehouses for maximum efficiency

17. MILP formulation in warehousing modeling stands for:

- A) Maximum Inventory Location Problem
- B) Minimum Inventory Level Problem
- C) Mixed-Integer Linear Programming
- D) Maximum Inventory Level Problem

- Answer: C) Mixed-Integer Linear Programming

18. Non-linear optimization for warehouse space allocation aims to:

- A) Maximize warehouse space utilization
- B) Minimize transportation costs
- C) Select the best suppliers
- D) None of the above

- Answer: A) Maximize warehouse space utilization

19. What does space calculation for warehouse involve?

- A) Determining the optimal layout of a warehouse

- B) Calculating the total space needed for storing goods
- C) Selecting the best suppliers
- D) Deciding where to locate warehouses for maximum efficiency
- **Answer: B) Calculating the total space needed for storing goods**

20. Warehouse modeling and analytics primarily aim to optimize:

- A) Vehicle routes
- B) Warehouse locations
- C) Supplier selection
- D) Inventory levels
- **Answer: B) Warehouse locations**

21. What does Data Envelopment Analysis (DEA) compare among multiple warehouses?

- A) Inventory levels
- B) Transportation costs
- C) Efficiency
- D) Supplier performance
- **Answer: C) Efficiency**

22. Stochastic Frontier Analysis (SFA) is used for:

- A) Comparing supplier performance
- B) Measuring efficiency in the presence of random factors
- C) Optimizing warehouse locations
- D) Determining transportation routes
- **Answer: B) Measuring efficiency in the presence of random factors**

23. What does DEA stand for in the context of strategic performance improvement?

- A) Data Efficiency Analysis
- B) Data Envelopment Analysis
- C) Decision Efficiency Analysis
- D) Deterministic Efficiency Analysis

- Answer: B) Data Envelopment Analysis

24. Strategic action plans for improving the efficiencies of non-performing DMUs refer to:

- A) Decision-making units
- B) Delivery management units
- C) Data management units
- D) Decision-making analyses

- Answer: A) Decision-making units

25. What type of analysis is Stochastic Frontier Analysis?

- A) Deterministic
- B) Probabilistic
- C) Static
- D) Dynamic

- Answer: B) Probabilistic

