



**Galgotias College of Engineering and Technology, Greater Noida**

**Pre University Test (PUT) : Odd Semester 2024 - 2025**

Roll No. : .....

Course/Branch : MBA(LSCM) Semester : III  
Subject Name : Supply Chain Analytics Max. Marks : 100  
Subject Code : KMLS306 Time : 180 min

- CO-1 : Explain the impact of analytics on managing supply chain flows and assess its practical applications through case studies.
- CO-2 : Apply key analytics tools and techniques, including SAP modules, and evaluate data using spreadsheets and Tableau.
- CO-3 : Develop and apply optimization models, analyze transportation data, and interpret results through spreadsheet simulations.
- CO-4 : Utilize forecasting methods, select variables for models, and analyze data to optimize inventory management.
- CO-5 : Design and evaluate logistics networks, discuss 3PL/4PL impacts, and apply IT solutions for enhanced supply chain performance.

**Section – A # 20 Marks (Short Answer Type Questions)**

Attempt ALL the questions. Each Question is of 2 marks (10 x 2 = 20 marks)

Q. No.	COx	Question Description # Attempt ALL the questions. Each Question is of 2 marks
1	a	CO1 What is Supply Chain Analytics and how does it benefit modern supply chains? (K1)
	b	CO1 What are the key components of Supply Chain Analytics? (K1)
	c	CO2 Explain the importance of descriptive analytics in a supply chain (K2)
	d	CO2 Explain the concept of decision domains in the context of supply chain analytics (K2)
	e	CO3 What role does optimization play in supply chain analytics? (K1)
	f	CO3 How does interpretative modeling impact supply chain decisions? (K1)
	g	CO4 Explain ARIMA and its significance in supply chain forecasting (K2)
	h	CO4 What are the advantages of exponential smoothing over other forecasting techniques? (K1)
	i	CO5 Explain the significance of Network Planning in supply chain management. (K2)
	j	CO5 How can performance optimization be achieved in supply chains through Information Technology? (K1)

**Section – B # 30 Marks (Long/ Medium Answer Type Questions)**

Attempt ALL the questions. Each Question is of 6 marks (5 x 6 = 30 marks)  
Q.2 (CO-1) : Explain the importance of analytics in managing the flows of material, money, information, and ownership within a supply chain. (K2)

OR

Identify the main tools utilized in supply chain analytics and outline their benefits. (K3)

Q.3 (CO-2) : Analyze the impact of the Bullwhip Effect on supply chain performance. (K4)

OR

Explain the concept of Descriptive Analytics and its use in supply chain decision-making (K2)

Q.4 (CO-3) : Discuss the role of data in supply chain analytics, particularly in transportation problems (K6)

OR

Examine the role of modeling software in enhancing the optimization of supply chain decisions. (K4)

Q.5 (CO-4) : Discuss the importance of exponential smoothing in supply chain forecasting. (K6)

OR

Explain the application of ARIMA models in forecasting for supply chain management. (K5)

Q.6 (CO-5) : Explain the role of 3PL and 4PL in optimizing supply chains? (K2)

OR

Elaborate on how applying heuristics in logistics network design can improve the efficiency of the supply chain. (K6)

**Section – C # 50 Marks (Medium/Long Answer Type Questions)**

Attempt ALL the questions. Each Question is of 10 marks.

Q.7 (CO-1) : Attempt any ONE question. Each question is of 10 marks.

- a. Examine how supply chain analytics can enhance the management of material, financial, informational, and ownership flows by providing real-world examples. (K4)
- b. Discuss the latest trends in Supply Chain Analytics and their implications for business strategy. (K6)

Q.8 (CO-2) : Attempt any ONE question. Each question is of 10 marks.

- a. Examine how the Bullwhip Effect disrupts supply chain operations and explore the analytical methods that can help mitigate its impact (K4)
- b. Explain the role of SAP Supply Chain Analytics in optimizing supply chain performance. (K5)

Q.9 (CO-3) : Attempt any ONE question. Each question is of 10 marks.

- a. Explain the key optimization techniques frequently applied in supply chain analytics. How do these techniques enhance decision-making in real-time operations? (K5)
- b. Explain how simulation models help address transportation and inventory issues in supply chains. (K5)

Q.10 (CO-4) : Attempt any ONE question. Each question is of 10 marks.

- a. Compare the forecasting models used in supply chain management, focusing on the advantages of ARIMA versus exponential smoothing. (K5)

Q.11 (CO-5) : Attempt any ONE question. Each question is of 10 marks.

- a. Discuss the challenges and benefits of using optimization techniques for logistics network design in supply chains. (K6)
- b. Evaluate the role of information technology in performance optimization within modern supply chains. (K5)