

19MEE311 – LSSSCM – ANSWER KEY

SET A

PART – A (5 x 2 = 10 Marks)

1. **Define supply chain fulcrum**

The supply chain fulcrum refers to the strategic balance point between supply and demand in a supply chain. By shifting this point through better responsiveness or lean operations, companies can optimize inventory, reduce costs, and improve service levels.

2. **Difference between demand management and demand planning**

- **Demand Management:** Broader strategy that includes influencing and aligning demand with supply (e.g., promotions, pricing).
- **Demand Planning:** A forecasting process using data analytics and historical trends to predict future demand.

3. **Explain the route map to responsiveness**

- Reduce lead times
- Increase visibility and collaboration
- Adopt agile practices (flexibility, postponement)
- Use technology and real-time data
- Implement supply chain segmentation

4. **Simplify the 'Quick response' logistics (Amazon)**

Amazon uses predictive analytics, real-time inventory tracking, warehouse automation (e.g., Kiva robots), and same-day delivery options to provide fast, efficient customer service.

5. **The future of global sourcing (McKinsey)**

- Diversification of sourcing base
- Nearshoring and friend-shoring
- Sustainability and ethical sourcing
- Use of digital sourcing platforms and AI
- Risk mitigation post-COVID and geopolitical instability

PART – B (Split-up: 13 Marks Each)

Q6. Responsive Supply Chain & Lead Time Gap

(a) Developing a Responsive Supply Chain

Content	Marks
Introduction to responsive supply chain	2
Concept of lead-time gap and its reduction	3
Role of demand visibility (e.g., POS data, CPFR)	3
Agile practices (e.g., postponement, modular design)	3

Content	Marks
Conclusion with benefits	2

(b) Real-World Examples & Supply Chain Models

Content	Marks
Introduction to responsiveness	2
Lean vs. Agile supply chain models	3
Case study: Dell (agile customization), Zara (fast fashion)	3
Push–Pull strategy or SCOR model	3
Conclusion with industry relevance	2

Q7. Role of IT in Lean & Agile Supply Chains

(a) Evaluation of IT in Lean and Agile Supply Chains

Content	Marks
IT's role in supply chain efficiency	2
Lean: ERP, Kanban systems, JIT enabled by IT	3
Agile: EDI, real-time tracking, cloud SCM	3
Examples: Toyota (lean), Amazon (agile)	3
Conclusion	2

(b) IT systems for QR, Global Complexity, Visibility

Content	Marks
QR logistics and IT: RFID, real-time dashboards	3
Global complexity: multi-tier SCM tools, TMS, WMS	3
Visibility: IoT, blockchain, control towers	3
Example: Amazon global logistics, DHL smart logistics	3
Conclusion	1

Q8. Demand Management and IT (Amazon)

(a) Achieving Responsiveness through Demand Management + IT

Content	Marks
Importance of demand management	2
IT support: forecasting tools, CRM, data analytics	3
Amazon case: anticipatory shipping, real-time data	3

Content	Marks
Coordination: suppliers, warehouses, last-mile	3
Conclusion	2

(b) Japanese Philosophy + Software Sector (Adobe)

Content	Marks
Japanese concepts: Kaizen, Just-in-Time, flexibility	3
Application to supply chain responsiveness	3
Adobe case: Agile development, cloud delivery, customer data	3
Benefits: faster response, user-driven features	3
Conclusion	1

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SET B

☐ PART – A (5 × 2 = 10 Marks)

1. **Define forecast capacity**

The ability of an organization to estimate future demand using analytical tools and data, ensuring capacity and resources are aligned with projected requirements.

2. **Formulate the lead time gap**

Lead Time Gap = Logistics Lead Time – Customer Order Cycle Time

This gap indicates how far supply capabilities lag behind customer expectations.

3. **State the product 'push' versus demand 'pull'**

- **Push:** Products are made based on forecasted demand.
- **Pull:** Production and distribution are based on actual customer demand signals.

4. **Mention the basic in virtual lean supply chain (Amazon)**

- Use of AI and big data
- Cloud-based platforms (AWS)
- Minimal inventory, just-in-time fulfillment
- Digital coordination of logistics and warehousing

5. **Explain about marketing logistics (Amazon)**

Integration of logistics with marketing strategies through personalized services, fast delivery (Prime), real-time order tracking, and customer-driven fulfillment.

☐ PART – B (Each 13 Marks)

Q6. Adobe and Responsiveness

(a) Adobe's Supply Chain Responsiveness and Agility (Digital Product Environment)

Sub-Content	Marks
Intro to digital supply chains	2
Adobe's move to subscription/SaaS model	2
Continuous updates via agile DevOps	2
Real-time customer usage data and feedback loops	2
Use of cloud infrastructure (e.g., Adobe Cloud)	2
Supply-demand balance in digital content	2

Sub-Content	Marks
Conclusion: Improved responsiveness and engagement	1

(b) Demand Planning and Pull-Based Strategies at Adobe

Sub-Content	Marks
Explanation of demand planning in digital delivery	2
Forecasting usage patterns via data analytics	2
Pull logistics in SaaS (on-demand updates, downloads)	2
Customer-centric development pipeline	2
IT-enabled product life cycle (Agile, DevOps)	2
Impact on cost and user experience	2
Summary	1

Q7. IT and Quick Response / McKinsey Digital Advice

(a) IT in Quick Response Logistics for Lean Global Supply Chains

Sub-Content	Marks
Define QR logistics in lean environments	2
Role of IT in reducing lead time	2
Tools: EDI, ERP, cloud logistics, AI	2
Real-time tracking (IoT, GPS, RFID)	2
Inventory sync and dynamic routing	2
Case example: Zara, Amazon, Toyota	2
Conclusion	1

(b) McKinsey's Digital Tools for Complexity Reduction and Responsiveness

Sub-Content	Marks
Global supply chain complexity challenges	2
McKinsey's digital strategies overview	2
Advanced analytics, AI, scenario simulation	2
Supply chain control towers and dashboards	2
RPA and smart automation tools	2
Industry case: Consumer goods or automotive	2
Summary	1

Q8. Amazon or Deloitte: Lead Time & Product Design Complexity

(a) Amazon's Strategy for Reducing Lead-Time Gap & Demand Visibility

Sub-Content	Marks
Define lead time gap and visibility	2
Amazon's anticipatory shipping model	2
Use of real-time customer data and ML	2
Fulfillment centers and geographic placement	2
Warehouse robotics and automation (Kiva)	2
Prime and last-mile delivery optimization	2
Conclusion	1

(b) Product Design and Complexity (Deloitte's IT Solutions)

Sub-Content	Marks
How product design causes SC complexity	2
Modular vs. customized design trade-offs	2
Deloitte's recommendation: PLM, digital twins	3
IT for early visibility into design impact	2

Sub-Content	Marks
Standardization and global compliance tools	2
Managing SKUs, forecasting via AI	2
Conclusion	1