

B.E. PRODUCTION ENGINEERING FOURTH YEAR FIRST SEMESTER – 2025

Subject: LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Time: Three Hours

Full Marks: 100

Answer Question No. 1 any Four from the rest

Instruction: Use appropriate schematic / flow diagrams and figures wherever possible / applicable

1. (a) How can the Competitive Strategy and Supply Chain Strategy be fit? How is strategic fit achieved? (5 + 5)
(b) Prepare & present a case study based on a company of your own choice to show the Push/Pull boundary and line of demarcation for efficiency & responsiveness. (Ensure that your chosen company should not be the same with other.) (10 + 10)
(c) What is Bull-Whip effect in a supply chain? Mention the causes in detail. How can you tackle it? (10)
2. (a) Explain & establish a Supply Chain Decision-Making framework by structuring the supply chain drivers.
(b) Now scan how these drivers are aligned to achieve the successful supply chain of the company you have studied in question no. 1(b). (10 + 5)
3. (a) What do you mean by circular economy? Explain with comparisons for Traditional Supply Chain, Sustainable Supply Chain and Circular Supply Chain.
(b) What is “Service Level”? Explain the effects of the increase and the decrease of service level. (10 + 5)
4. (a) Explain the key drivers used to Tailored Network in transportation management.
(b) Elaborate the pros and cons of the various transportation network options. (5 + 10)
5. (a) What types of distribution networks are typically best suited for commodity items? Explain.
(b) How do the location and size of warehouses affect the performance of a firm such as amazon.in? (10 + 5)
6. (a) Elucidate the role of IT in a supply chain.
(b) Elaborate the future of IT in the supply chain. (10 + 5)
7. (a) Discuss the various factors that affects the decision to outsource a supply chain function and identify dimensions of supplier performance that affect total cost.
(b) Elaborate the services provided by third party logistics (3PLs). (10 + 5)

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