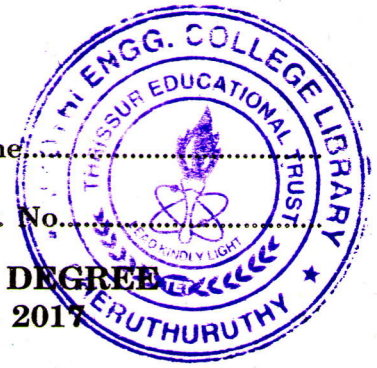


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**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE
[2014 SCHEME] EXAMINATION, NOVEMBER 2017**

Mechanical Engineering

ME 14 705 A—LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer any eight questions.
Each question carries 5 marks.*

1. Compile, how supply chain management decisions impact the ability to excel in various dimensions of customer value.
2. "Facilities in supply chain frequently have, different and conflicting objectives"—Justify with examples.
3. Discuss about the techniques in inventory management with examples.
4. A retailer of popular books, demand is constant at 32,000 books per year. The cost of placing an order to replenish stock is Rs. 600, and the annual cost of holding is Rs. 240 per book. Stock is received 5 working days after an order has been placed. No backordering is allowed. Assume 300 working days a year.
 - (i) What is optimal order quantity, optimal number of orders per year, optimal interval (in working days) between orders ?
 - (ii) What is demand during the lead time ?
 - (iii) What is the reorder point ? What is the inventory position immediately after an order has been placed ?
5. "Distortion of, demand related information affects supply chain efficiency"—Justify with the measures to be taken to overcome bullwhip effect.
6. Discuss the types of Retailer - Supplier partnerships (RSP), their requirements, implementation steps and advantages-disadvantages.
7. Discuss about the steps to be followed while implementing IT software packages for supply chain management. Do these steps vary from package to package ? How are they standardized ?
8. Describe the factors influencing Distribution Network Design with examples.
9. Explain the role of logistics in supply chain with examples.
- 10 Explain different types of distribution strategies with their merits and demerits by furnishing suitable examples.

(8 × 5 = 40 marks)

Turn over

Part B

Answer all questions.

Each question carries 15 marks.

11. (a) Elaborate the key issues in Supply Chain Management with examples.

Or

(b) Discuss push, pull and push-pull strategies of supply chain with example.

12. (a) Describe time series demand forecasting methods with example.

Or

(b) Explain the significance of uncertainty in supply chain. Also discuss how to manage uncertainty in supply chain.

13. (a) Elucidate in detail about steps involved in supplier integration into new product development.

Or

(b) Discuss various trade-offs in the supply chain and explain how Advanced information technology helps to reduce their impacts.

14. (a) Explicate in detail about various steps taken for reconfiguring a supply chain network design.

Or

(b) Organizations are increasingly outsourcing supply chain functions to 3 Party Logistics (3PL) service providers. Analyze the role of 3PL service providers and the criteria required for the success of such operations.

(4 × 15 = 60 marks)