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# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Seventh Semester, B.E. - Industrial and Production Engineering

Semester End Examination; Jan. / Feb. - 2021

Supply Chain Management

Time: 3 hrs

Max. Marks: 100

**Note:** Answer **FIVE** full questions, selecting **ONE** full question from each unit.

## UNIT - I

- 1 a. What is supply chain? Explain various supply chain strategies with a neat diagram. 10
- b. Describe how strategic fit is achieved? 10
- 2 a. With a neat diagram, describe the 4 frameworks for structuring drivers. 8
- b. What are the obstacles for achieving strategies fit? Explain briefly. 12

## UNIT - II

- 3 a. Mention the various factors influencing distribution networks design and explain briefly each of them. 15
- b. With a neat diagram, explain manufacturer storage with direct shipping. 5
- 4 a. What are the factors influencing network design decisions? Explain strategic factor briefly. 10
- b. Write a short note on the following:
  - i) The impact of uncertainty on network design 10
  - ii) Disconnected cash flow analysis

## UNIT - III

- 5 a. Describe the role of cycle inventory in the supply chain. 8
  - b. Demand for computer at best buy is 1000 pcs / month. Best buy incur a fixed order placement, transportation and remaining cost of Rs. 4000 each time an order is placed each computer costs best buy Rs. 500 and the retailer has a holding cost of Rs. 20% 12
- Determine the following:
- i) Optimal order size
  - ii) Cycle Inventory
  - iii) Number of orderly item
  - iv) Holding Cost
  - v) Average flow time
- 6 a. Describe the two managerial levers to improve supply chain profitability. 10
  - b. Explain the factors affecting optimal level of product availability. 10

## UNIT - IV

- 7 a. Mention the various factors that must be considered for supplier scoring and assessment and explain any five of them. 15
- b. Write a short note on design collaboration. 5

- 8 a. List down the factors affecting carrier decision and explain them briefly. 10
- b. Describe the following:
- i) Revenue management for perishable assets 10
  - ii) Bulk and spot contacts.

**UNIT - V**

- 9 a. Explain the major obstacles to coordination in supply chain. 10
- b. List the managerial levers to achieve coordination. 10
10. Write a short note on the followings:
- a) Reverse logistics
  - b) RFId systems 20
  - c) E-Business framework
  - d) Lean supply chains

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