

# CBCS SCHEME

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18ME653

Sixth Semester B.E. Degree Examination, June/July 2023

## Supply Chain Management

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. What is Supply Chain Management? Explain the network of SCM, with a relevant diagram. (10 Marks)
- b. Explain the importance of SCM in the present context for an Organization. (10 Marks)

OR

- 2 a. Explain two views of SCM process. (12 Marks)
- b. What is Responsiveness with reference to SCM? How do you achieve it? Explain. (08 Marks)

### Module-2

- 3 a. Explain the Strategic Outsourcing process, with a neat flow chart. (10 Marks)
- b. What is Make V/s Buy strategy? How Economics of Scale influences Make V/s Buy decision? Explain briefly. (10 Marks)

OR

- 4 a. What are the two different modes of supplier selection? Explain briefly. (10 Marks)
- b. Why Supplier development is essential to achieve or create a World class supply base. (10 Marks)

### Module-3

- 5 a. List and explain different objectives of Stores and Warehouse Management. (10 Marks)
- b. Explain briefly different modes of transportation of transporting goods. (10 Marks)

OR

- 6 a. Explain various factors which influence the distribution network design. (08 Marks)
- b. List and briefly explain the objective function, constraints of following models : (12 Marks)
- i) Capacitated plant location model ii) Gravity location model.

### Module-4

- 7 a. Mr. Sampath is planning to open a Computer store. He has 2 choices to make , large or small. The demand can be either low or high with probabilities of 0.45 and 0.55 respectively. If small store is built at high demand annual revenue is estimated as Rs 20 lakhs. Later he can either expand that or do nothing. If he expands the revenue will increase to 40 lakhs with an investment for expansion being 5 lakhs. If he does nothing , his revenue will remain same as earlier. At low demand he will do nothing and revenue will be 10 lakhs. If he builds large store, at high demand , he will earn Rs 80 lakhs annually. At low demand, either he can sell it for Rs 30 lakhs or wait for better future which will get him a revenue of Rs 50 lakhs. If the cost of building and large store is Rs 30 lakhs and small store is Rs 10 lakhs, which store must be built? Use decision tree for your analysis over a 1 year period. Without considering discounted cash flow. (12 Marks)
- b. Explain the law of demand and optimal pricing decision with a suitable example. (08 Marks)

OR

- 8 a. Explain the concept of overbooking with relevant model and a suitable example. (10 Marks)  
 b. A Manager at a warehouse department plans for the size of the warehouse. The study reveals that the housing needs is normally distributed with a mean of 6,00,000 square feet and standard deviation of 195, 000. The Manager can lease a warehouse in advance for next 3 years at Rs 300000/year or purchase the warehouse on the spot market at an average of Rs 500000/year. How large, the annual contract should the Manager sign? (10 Marks)

Module-5

- 9 a. Why Integration is necessary in a supply chain? How do you achieve it? Explain. (10 Marks)  
 b. What is Bull Whip effect? What causes it? How do you control it? Explain briefly.(10 Marks)

OR

- 10 a. Explain the concept of Supply Chain Mapping with relevant diagrams. (10 Marks)  
 b. Is information technology a key driver for the success of SCM? What characteristics of Information will support supply chain decision? Explain briefly. (10 Marks)  
 Note : for question 8b , choose the suitable value from the following table :

Value of K	Service level in %
- 0.1	46.0
- 0.2	42.1
- 0.3	38.2
- 0.4	34.5
- 0.5	30.8
- 0.6	27.5
- 0.7	24.5

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