

Student Exam No. _____

GANPAT UNIVERSITY

B. Tech. Semester: IV (EE/Civil/BM&I/ME/MC/EC/IT/CE) Engineering

Regular Examination May-June 2014

(20S401) Supply Chain Management-Planning

Time: 3 Hours

Total Marks: 70

- Instruction:**
1. Attempt all questions.
 2. Figure to **right** indicate **full** marks of the question.
 3. Answer to each section must be written in **separate** answer book.
 4. Assume suitable data, if **necessary**.
 5. Draw sketches whenever **required**.

Section-I

- Que.-1**
- | | | |
|-----|---|---|
| (a) | Describe design phases in supply chain. | 6 |
| (b) | Define Supply chain Management. Write down objectives of supply chain management. | 6 |

OR

- Que.-1**
- | | | |
|-----|---|---|
| (a) | Explain the Frame Work for supply chain drivers. | 6 |
| (b) | Describe Supply chain for Dell computer. What decisions they have made to be successful in the PC market. | 6 |

- Que.-2**
- | | | |
|-----|--|---|
| (a) | Discuss the drivers of SCM. | 5 |
| (b) | Explain role of facility in Supply Chain and Competitive Strategy. | 6 |

OR

- Que.-2**
- | | | |
|-----|---|---|
| (a) | Explain: Manufacturer storage with direct shipping and in-transit merge. | 6 |
| (b) | List the factors influencing network design decisions. Explain any two of them. | 5 |

- Que.-3**
- | | | |
|-----|---|---|
| (a) | Explain framework for network design decision. | 6 |
| (b) | List and explain the three basic steps for achieving strategic fit. | 6 |

Section – II

- Que.-4 (a) What is role of transportation in supply chain and competitive strategy? 6
- (b) Summarize the basic step in the decision tree analysis methodology. 6

OR

- Que.-4 Draw Decision tree for the following problem. And Determine the present value of expected profit for Period 1 for spot market. 12

One thousand square feet of warehouse space is required for every 1,000 units of demand, and the current demand at Trips Logistics is for 100,000 units per year. The manager decides to use a multiplicative binomial representation of uncertainty for both demand and price. From one year to the next, demand may go up by 20 percent with a probability of 0.5 or go down by 20 percent with a probability of 0.5. The probabilities of the two outcomes are unchanged from one year to the next. The general manager can sign a three-year lease at a price of \$1 per square foot per year. Warehouse space is currently available on the spot market for \$1.20 per square foot per year. From one year to the next, spot prices for warehouse space may go up by 10 percent with probability 0.5 or go down by 10 percent with probability 0.5 according to a binomial process. The probabilities of the two outcomes are unchanged from one year to the next.

The general manager feels that prices of warehouse space and demand for the product fluctuate independently. Each unit Trips Logistics handles results in revenue of \$1.22 and Trips Logistics is committed to handling all demand that arises. Trips Logistics uses a discount rate of $k = 0.1$ for each of the three years.

- Que.-5 (a) Explain EOQ. 5
- (b) Demand for the Deskpro computer at Best Buy is 1, 000 units per month. Best Buy incurs a fixed order placement, transportation, and receiving cost of \$4,000 each time an order is placed. Each computer costs Best Buy \$500 and the retailer has a holding cost of 6

20 percent.

Evaluate the number of computers that the store manager should order in each replenishment lot. Also find out Annual Ordering and holding cost.

OR

- Que.-5 (a) Explain the capacitated plant location model with its objective function and constraints. 6
(b) Describe the basic principle of DCFs and how they can be used to compare stream of cash flows. 5
- Que.-6 (a) Compare the supply chain of FedEx and UPS. 6
(b) Explain Gravity Methods for Location. 6

END OF PAPER