

B.E.FULL TIME DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2011

INDUSTRIAL ENGINEERING

SIXTH SEMESTER- (REGULATION-2004)

IE513 SUPPLY CHAIN MANAGEMENT

Time: 3 hr

Max. Mark: 100

Answer ALL Questions

Part-A (10 X 2 = 20 Mark)

1. What are the objectives of supply chain Management?
2. List any few drivers used in Supply chain performance.
3. What are the factors influencing distribution network design?
4. What is the role of distribution in supply chain?
5. What are the applications of scheduling in Transportation?
6. In what ways does the transportation helps in supply chain?
7. Define Design Collaboration
8. What is Bull whip effect?
9. What is the role of IT in supply chain?
10. Define CRM

Part-B (5 X 16 = 80 Marks)

11. There are four sites with the following symmetric distance matrix (Table 1) and non-symmetric requirement matrix (Table 2):

Table 1: Symmetric distance Matrix

00	65	104	53
	00	77	101
		00	98
			00

Table 2: Non Symmetric Requirement Matrix

00	30	3	11
4	00	14	24
12	7	00	6
3	17	00	00

Two vehicles with capacity 20 tonnes are available in each site

- (a) Provide a solution to the VRP problem that minimizes total distance travelled if each vehicle can visit more than two sites and only drops items and does not pick up. (8)
- (b) Provide a feasible solution VRP that minimizes total distance travelled if each vehicle can visit more than two sites and can pick up for other sites if capacity is available. (8)

12 (a) Briefly explain the role of logistics and supply chain management? Highlight the importance of evolution of supply chain? Describe the supply chain models and modeling systems? (16)

OR

12 (b) Explain the decision phases, competitive and supply chain strategies in supply chain? (16)

13 (a) Explain the Procedure of Design options for distribution network in supply chain with suitable illustrations? (16)

OR

13 (b) Describe the role of network design in supply chain? Briefly explain the framework for network decisions? (16)

14 (a) (i) Explain the role of sourcing in supply chain? Describe the supplier selection assessment and contracts in supply chain? (16)

OR

14 (b) Explain the steps involved in sourcing planning and Analysis, supply chain co-ordination in supply chain management? (16)

15 (a) Draw the supply chain IT Framework and explain its components? Explain the Internal supply chain management and supplier relationship management? (16)

OR

15 (b) Write short notes for the following:

- (i) E-business in supply chain (4)
- (ii) Effect of Lack of co-ordination in supply chain (4)
- (iii) Building strategic partnerships in supply chain (4)
- (iv) Tailored Transportation (4)