

**ME DEGREE EXAMINATIONS: APRIL / MAY 2010**

Second Semester

**INDUSTRIAL ENGINEERING**

IEE508: Supply Chain Management

**Time: Three hours**

**Maximum marks: 100**

**Answer All Questions:**

**PART A (10 x 2 = 20 Marks)**

1. List the tasks of supply chain.
2. What are core skills?
3. What are 'also ran' companies?
4. List the advantages of CPC.
5. Give the mathematical expression for EOQ.
6. Differentiate product fill rate and order fill rate.
7. What is cross docking?
8. List the factors affecting transportation decisions.
9. What is bull-whip effect?
10. Differentiate B2B and B2C.

**PART B (5 x 16 = 80 Marks)**

11. (a) Discuss on the characteristics of a modular company.

**(OR)**

(b) What is a supply process? Explain the various factors affecting supply process.

12. (a) Elaborate on the different stages in the manufacturing strategy.

**(OR)**

(b) Sketch and explain the PLC grid with relevant case studies.

13. (a) Enhance the role of economies of scale to exploit quantity discounts.

**(OR)**

(b) What is product availability? Explain the different factors affecting optimal level of product availability.

14. (a) What are the different modes of transportation? List and compare their performance characteristics with suitable examples.

**(OR)**

(b) SWIFT transportation has orders from 13 different customers. The location with respect to various customers on the grid and their order size is shown in table 1. The transportation company has 4 trucks each capable of carrying 200 units. Using savings matrix method, devise suitable delivery schedules and find the minimum distance travelled.

15. (a) Identify and explain the different obstacles to Supply chain coordination.

**(OR)**

(b) Elaborate on the impact of e-business on Supply chain performance.

TABLE I

	X Coordinate	Y Coordinate	Order Size
Ware house	0	0	
Customer 1	0	12	48
Customer 2	6	5	36
Customer 3	7	15	43
Customer 4	9	12	92
Customer 5	15	3	57
Customer 6	20	0	16
Customer 7	17	-2	56
Customer 8	7	-4	30
Customer 9	1	-6	57
Customer 10	15	-6	47
Customer 11	20	-7	91
Customer 12	7	-9	55
Customer 13	2	-15	38