

22

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.E/B.Tech (FULL-TIME) DEGREE END SEMESTER EXAMINATIONS - NOV/DEC 2011

INDUSTRIAL ENGINEERING

SEVENTH SEMESTER

IE9033 – SUPPLY CHAIN MANAGEMENT

(REGULATIONS 2008)

Time: 3 Hours

Max.Marks:100

Answer ALL Questions

Part-A (10 X 2 = 20 Marks)

1. Compare contributor facility with outpost facility
2. What is temporal aggregation? When it can be allowed?
3. What is perfect order fulfillment and how is it calculated?
4. What is inventory turns and why is it important?
5. What are supply chain metrics and why are they important?
6. What is meant by manufacturing postponement? Why it is required?
7. When are quantity discounts justified in a supply chain?
8. How can design collaboration with suppliers help manufacturer to improve performance?
9. What do you mean by VMI?
10. State different variants of VRP with appropriate examples.

Part-B (5 X 16 = 80 Marks)

11. Read the following case and answer in detail for the questions given at the end.

Kozmo, the online convenience store to shut down

New York-based Kozmo, the 3-year-old company announced that it would stop delivery service in all nine cities it operates. New York-based Kozmo, which dispatched legions of orange-clad deliverymen to cart goods to customers' doors, is the latest dot.com dream to evaporate in the market downturn. Amazon.com, venture capital firm Flatiron Partners and coffee giant Starbucks were among the investors in Kozmo.

Kozmo said in December that investors promised a total of \$30 million in private funding. But last month the company learned that an investor had backed out of a \$6 million commitment. Kozmo executives had been working on a merger deal with Los Angeles-based PDQuick, another online grocer, sources said. The deal collapsed when funding that was promised to PDQuick did not materialize. Sources said Kozmo still has money but decided to close now and liquidate to ensure that employees could receive a severance package.

Just last month, Kozmo Chief Executive Gerry Burdo was upbeat about Kozmo's future, saying he was looking to steer Kozmo away from its Internet-only business model and toward a "clicks and bricks" approach. But some analysts say Kozmo's business model only made sense in the context of a densely packed city such as New York. Vern Keenan, a financial analyst with Keenan Vision, said the service had a chance to work in only a few other cities around the world, such as Lincoln, Stockholm or Paris. "This seemed like a dumb idea from the beginning," Keenan said. "This grew out of a New York City frame of mind and it simply didn't translate."

Kozmo was started by a pair of twenty-something former college roommates. They got the idea for the company on a night when they craved videos and snacks and wished a business existed that would deliver it to them. Kozmo offered free delivery and charged competitive prices when it launched in New York. Though customers loved the service, the costs of delivery were high.

After co-founder and former Chief Executive Joseph Park stepped down, Burdo slashed Kozmo's overhead, instituted a delivery fee and oversaw several rounds of layoffs. The company also closed operations in San Diego and Houston. Burdo said last month that profitability was not far away. The company had reached a milestone last December when it reported profits at one of its operations for the first time. Kozmo later saw two more operations reach profitability as a result of brisk holiday business.

Online delivery companies have been among the most ravaged by the Internet shakeout. Kozmo's rival in New York, Urban fetch, shuttered its consumer operations last fall. Online grocers such as Webvan and Peapod have also struggled, and smaller operations such as Streamline.com and ShopLink.com have dosed down. Peapod was days away from closing last year when Dutch grocer Royal Ahold agreed to take a majority stake.

From the very beginning, supply chain management was to be a core competency of Kozmo. The promising dot.com would deliver your order everything from the latest video to electronics equipment in less than an hour. The technology was superior, the employees were enthusiastic, the customers were satisfied. But eventually, Kozmo ran out of time and money.

Questions:

- (i) What, in your opinion, is the major reason for the failure of Kozmo?
- (ii) Do you think that Kozmo promised what its supply chain could not bear? What could have prevented its shut-down?

12a. Explain how e- business has affected the design of distribution networks in various industries.

(OR)

12b. What are the essential differences in the Supply Chain Management of Products Vs. Services? Discuss the application of Supply Chain Management principles in Financial Services.

- 13a.(i) Briefly describe the application of heuristics for Routing and Scheduling in transportation
- (ii) The manager at alpha grocery chain store has 12 orders that are to be delivered to customers. The location and order size for each customer is given in the following table:

	X Co ordinate	Y Co ordinate	Order Size
DC	0	0	
Customer 1	-12	0	75
Customer 2	-5	6	55
Customer 3	-15	7	68
Customer 4	-12	9	109
Customer 5	-3	15	81
Customer 6	0	20	41
Customer 7	2	17	74
Customer 8	4	7	52
Customer 9	6	1	80
Customer 10	6	15	69
Customer 11	7	20	103
Customer 12	9	7	75

The alpha grocery store has five trucks, each capable of carrying up to 225 units. Use the savings matrix methods to devise suitable delivery Schedule.

(OR)

13b. (i) Briefly explain salient features of various design options for Transportation networks

(ii) For the problem given in (13a) apply sweep methods to devise suitable delivery Schedule

14a. Explain the role of supply contracts and their impact on supplier performance and information distortion.

(OR)

14b. Describe supply chain coordination and the Bull whip effect and their impact on supply chain performance.

15a. "Many innovations on technology-based approaches are well-suited to the enhancement of the effectiveness of Supply Chain Management"- Justify the statement by giving few applications of information technology in SCM.

(OR)

15b. Briefly explain the following:

- (i) Reverse Logistics
- (ii) Third Party Logistics service
- (iii) Warehouse Management practices
