

UNIVERSITY OF BOLTON
SCHOOL OF BUSINESS AND CREATIVE
TECHNOLOGIES
MSC SUPPLY CHAIN MANAGEMENT
SEMESTER 1
EXAMINATIONS 2009/2010
PHYSICAL SUPPLY CHAIN MANAGEMENT
MODULE NO: EBU 4009

Date: Wednesday 20 January 2010

Time: 14:00 – 16:00

INSTRUCTIONS TO CANDIDATES:

There are 6 questions on this paper.

Answer 4 questions.

All questions carry equal marks.

Where appropriate, the inclusion of hand-drawn diagrams in your answers is encouraged.

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1.
 - a. You are employed by a retail network that sells electrical, grocery, frozen and fresh food and stationery items. It has four distributions centres in London, Manchester, Birmingham, and Glasgow
What are the factors that you will consider while analysing the performance of the distribution centres and why you want to consider them?
(15 Marks)
 - b. You manage the warehouse of a company which supply electrical consumable products directly to retail outlets such as Tesco. The demand patterns for these products are very erratic. The retail outlets have very little storage space in their store room. It so happens that the allocated floor space is not enough to fulfil the demand
What actions will you take to address this issue?
(10 Marks)
2.

What do you mean by visibility in the supply chain? What are the factors that enable and disrupt this visibility? How will you use this as a tool for tackling the supply chain dynamics?
(25 Marks)
3.

Vendor managed inventory is an important way to address complexity of a supply chain. With reference to the above statement answer the following questions.

 - a. Discuss the various advantages and disadvantages that are brought together by VMI.
(8 Marks)
 - b. How can an organization reduce the risk of failure in VMI based supply chain processes
(8 Marks)
 - c. How does the ability to share information with suppliers add to the effectiveness of VMI
(9 Marks)
4.

For both (i) an MRP system **and** (ii) a Kanban system:

 - a. Describe in detail the mechanisms by which each acts as a trigger for inventory replenishment;
(10 marks)
 - b. Discuss the circumstances in which it would be appropriate to use each system and discuss the likely effect of each on inventory levels.
(8 marks)
 - c. How might the two systems be used together to control inventory flows within a single manufacturing plant?
(7 marks)

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5.

- a. Provide a definition and an example of strategic storage and distribution from a logistical system you are familiar with

(5 Marks)

- b. Discuss the logistics characteristics of a firm moving toward a globally integrated enterprise

(10 Marks)

- c. A milk processing company runs its own fleet of vehicles to distribute unprocessed milk from farms, and to distribute bottled milk to supermarkets. Discuss the advantages and disadvantages of outsourcing transportation to a third party logistics provider.

(10 marks)

6.

- a. Discuss the relationship between service level, uncertainty, safety stock and order quantity. How can trade-offs between these elements be made?

(15 Marks)

- b. Discuss some of the strategies that firms can use to overcome the challenges related to transportation infrastructure congestion. **(10 Marks)**

END OF QUESTIONS