

UNIVERSITY OF BOLTON

**BUSINESS LOGISTICS, INNOVATION AND
SYSTEMS**

**BSC LOGISTICS AND SUPPLY CHAIN
MANAGEMENT**

SEMESTER 1 EXAMINATIONS 2008/2009

SUPPLY CHAIN OPERATIONS

MODULE NO: BIS1207

Date: 19 January 2009

Time: 10am-12noon

INSTRUCTIONS TO CANDIDATES:

There are 6 questions on this paper.

Answer 4 questions.

All questions carry equal marks.

BLIS
Supply Chain Management
Semester 1 Examination 2008/2009
Supply Chain Operations
Module No. BIS1207

1. Describe both the ABC and Runner/Repeater/Stranger systems for classifying products. **(10 Marks)**

Describe the differences in the way inventory may be controlled for category A and category C parts. **(5 Marks)**

Describe other uses for the ABC classification system. **(10 Marks)**

2. Describe the types of inventory held within the supply chain, the purpose of each and the relationship between lead-time, inventory and make to order and make to stock policies. **(25 Marks)**

3. Explain the principles behind MRP (Material Requirements Planning) and describe the database elements needed for its use. **(15 marks)**

Define Dependent Demand and Independent Demand and describe the structure and elements that make up the Bill of Material. (use appropriate sketched diagrams to support your answer) **(10 marks)**

4. You are developing a new component and raw material stock control system for Microsmart, a manufacturer of hi-tech automotive systems.

Describe how a range of different replenishment systems work. **(15 marks)**

Say how you would select the most appropriate system **(10 marks)**

5. Discuss the causes of the Bullwhip effect in a multi-tier supply chain **(8 marks)**

What problems can the bullwhip effect cause companies in the supply chain **(7 marks)**

Describe initiatives that can be taken to reduce the bullwhip effect. **(10 marks)**

6. A milk processing company runs it's own fleet of vehicles to distribute raw milk from farms, and to distribute bottled milk to supermarkets.

With detailed reference to this particular product and application, discuss the advantages and disadvantages of owning the fleet. **(12.5 marks)**

In contrast to your answer above, describe the advantages and disadvantages of outsourcing transportation to a third party logistics provider. **(12.5 marks)**

END OF QUESTIONS