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Course code:	ORG440
Course name:	Supply Chain Management
Date:	18 December 2012
Duration:	09.00 – 13.00
Number of pages incl. front page	2
Resources allowed:	Non-programmable calculators and English dictionaries may be used

Notes: Instructions to candidates
The exam consists of section A and B. The question in section A **MUST** be answered. In section B **choose to answer ONE of the TWO blocks of questions and answer all the questions within.**
The marks per question are shown in brackets at the start of each question. In total, 100 marks can be reached.
Only answers in English are acceptable.
Attention will be paid and marks awarded for clear, concise answers. Please ensure all handwriting is legible.

SECTION A: mandatory!

I. Explain the six key developments behind the evolution of logistics and SCM! (30)

SECTION B: Choose ONE block of questions (II) or (III) and answer ALL questions that belong to the block, i.e., either II.a to II.c or III.a to III.c. Please mark on the exam sheet, which block you chose (II or III).

II. Supply chain risk management

- a. What is meant by supply chain vulnerability? What is the difference between the event-based and the vulnerability-based concept of risk? (15)
- b. Why is a robust SC not necessarily resilient? In your explanation, please refer to the concepts of agility and adaptability! (15)
- c. Outline how you would go about assessing the capability of a supply chain to cope with unexpected risks! Please refer to Peck's model of the supply chain when explaining your strategy. (40)



- III. SC Planning and control
- a. Explain how a reduction in lead time can help a supply chain reduce its inventory buffer without hurting customer service. (10)
 - b. BUG inc. is a supplier of computer manufacturers. A key part of BUG's business is selling hard disk drives (HDDs). The annual demand is approximately 1200 hard disks. BUG pays \$40 for each HDD and estimates that the annual holding cost is 30 percent of the HDD's value. It costs approximately \$30 to place an order (including all costs). The supplier currently orders 100 batteries per month. (45)
 - a. Determine the ordering, holding, and total inventory costs for the current order quantity.
 - b. Determine the economic order quantity (EOQ). How many orders will be placed per year using the EOQ?
 - c. Determine the ordering, holding, and total inventory costs for the EOQ. How have the ordering, holding and total inventory cost changed?
 - c. What is a safety stock? Why is amazon.com able to provide large varieties of books and music with less safety inventory than a similar bookstore chain selling through retail stores? (15)

Good luck!