



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2017/2018**

COURSE NAME : SUPPLY CHAIN MANAGEMENT
COURSE CODE : BPB 32303
PROGRAMME CODE : BPA
EXAMINATION DATE : DECEMBER 2017/ JANUARY 2018
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 (a) Lack of supply chain coordination can result in a phenomenon called *bullwhip effect*.

(i) Define bullwhip effect.

(2 marks)

(ii) State the impact of bullwhip effect on supply chain.

(1 mark)

(iii) Explain **TWO (2)** conditions that can cause lack of coordination in supply chain.

(4 marks)

(b) A supply chain manager must be able to identify the key obstacles to coordination in order to maximize the supply chain surplus.

Discuss **TWO (2)** key obstacles to coordination, with an example for each obstacle.

(10 marks)

(c) Information distortion can be dampened by practices that assign replenishment responsibility across the supply chain to a single entity. A single point of replenishment decisions ensures visibility and a common forecast that drives orders across the supply chain. There are two common industry practices that can be used to assign a single point of responsibility.

Discuss the **TWO (2)** common industry practices.

(8 marks)

Q2 IKEA, the Scandinavian home furnishing retailer, has built a global network with 400 stores in 49 countries primarily on the basis of effective transportation. The company works hard to find the most inexpensive global sources for each of its products. Modular design of its furniture allows IKEA to transport its goods worldwide much more cost effectively than a traditional furniture manufacturer. The large size of IKEA stores and shipments allows inexpensive transportation of home furnishings all the way to the retail store.

Similarly, Seven-Eleven Japan is another firm that has used transportation to achieve its strategic goal of carrying products in its stores to match the needs of customers as they vary by geographic location or time of day. To help achieve this goal, Seven-Eleven Japan uses responsive transportation system that replenishes its stores several times a day so that product available matches customers' needs. It also uses supply aggregation to decrease its transportation and receiving costs.

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- (a) Discuss **THREE (3)** types of transportation mode and their performance characteristics that IKEA and Seven-Eleven Japan can use to achieve their supply chain goals. (15 marks)
- (b) Compare transportation network design, with illustration, that is most suitable to be used by IKEA to achieve its supply chain cost efficiency goal and by Seven-Eleven Japan to achieve its supply chain responsiveness goal. (10 marks)

Q3 Imagine that you are a manager of a textile company in Batu Pahat. Your company has decided to design and sell a new series of textile and garment products that are made of organic cotton. The production of the products will be outsourced to third parties. As a manager, you need to ensure that the sourcing strategies that your company uses will be able to help it achieve its supply chain efficiency and responsiveness goals. In addition, suitable supply contracts must be developed to make the terms of the buyer-supplier relationship explicit.

- (a) Explain **THREE (3)** issues that must be considered when making sourcing decisions. (6 marks)
- (b) Use sourcing process framework to discuss the steps that your company must follow in making sourcing decision. (15 marks)
- (c) Choose, with justification, **ONE (1)** supply contract design that you can use to optimize the overall supply chain profits. (4 marks)

Q4 The following is an excerpt of a report published by The Guardian (2017) on the global health risk of factory farming in Asia.

“The use of antibiotics in factory farms in Asia is set to more than double in just over a decade, with potentially damaging effects on antibiotic resistance around the world. Factory farming of poultry in Asia is also increasing the threat of bird flu spreading beyond the region, with more deadly strains taking hold, according to a new report from a network of financial investors.

Use of antibiotics in poultry and pig farms will increase by more than 120% in Asia by 2030, based on current trends. Half of all antibiotics globally are now consumed in China alone. The Chinese meat and animal feed producers New Hope Group and Wen’s Group are now among the 10 biggest animal feed manufacturers in the world.

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The growth of Asian meat production in intensive units is also producing a rise in greenhouse gas emissions from the food chain, with emissions likely to rise by more than 360m tonnes, the equivalent of running 100 coal-fired power plants for a year. There are knock-on impacts such as deforestation, as China's need for animal feed is responsible for more than a third of Brazil's soybean production.

The report, *Factory Farming in Asia: Assessing Investment Risks*, comes three years after a meat scandal in China, in which suppliers to McDonalds, KFC and others were found to be using dirty meat and products past their sell-by date. It also comes in the midst of a growing food scandal in Europe, which has required the recall of millions of eggs tainted with harmful chemicals, and as concerns have been aired over the impact of Brexit on imports of farm products to the UK.

Asian food companies have rapidly expanded their meat production in response to growing populations and the tastes of the rising middle class, but this expansion has come to the detriment of food safety.

The report also found that deploying modern techniques could assist in reducing the impact of factory farming – for instance, by using barcodes to enable consumers to check the provenance of eggs, by reducing greenhouse gases and improving the health of livestock.

The authors of the study recommended that investors assess the risks of food production in the assets they hold, as financial firms can persuade the companies they fund to make improvements in their supply chain.”

Imagine that you are a supply chain manager of a poultry company in Malaysia with supply chain network that operates all over Asia. You are required to develop a set of strategies to help your company address the supply chain issues mentioned in the article.

- (a) Discuss your supply chain strategies using **THREE (3)** supply chain macro processes. (15 marks)
- (b) Choose **TWO (2)** supply chain drivers that your company should focus on to improve its supply chain sustainability, with justifications for your choices. (10 marks)

-END OF QUESTIONS-

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