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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024**

- COURSE NAME : SUPPLY CHAIN MANAGEMENT
- COURSE CODE : BPB 32303
- PROGRAMME CODE : BPA
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA
 - Open book
 - Closed book
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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- Q1** Company ABC, a leading e-commerce retailer, is revamping its distribution network to meet the growing demand for its products while optimizing costs and service levels.
- (a) Explain **TWO (2)** key decisions that the company should consider when designing its distribution network.
(6 marks)
- (b) Differentiate **FOUR (4)** distributions network design that Company ABC might use upon revamping their distribution network towards meeting the growing demand.
(16 marks)
- Q2** Company Y, a multinational corporation specializing in consumer electronics, is planning to expand its supply chain network to support its growing market presence worldwide. As part of this expansion, they are embarking on a comprehensive framework for network design decisions. As a consultant,
- (a) Justify **TWO (2)** factors that might influence the network design decisions of Company Y.
(8 marks)
- (b) Propose **THREE (3)** phases of network design decision that the Company Y need to apply in order to optimize its network design.
(15 marks)
- Q3** Zelta Electronics is a company that specializes in manufacturing smartphones. They have an annual demand forecast of 50,000 units for a specific component used in their smartphones. Currently, they procure this component from their main supplier, Tech Parts Co., at a cost of RM15 per unit if they order at least 5,000 units. However, a new supplier, Global Electronics, has offered the same component at RM14.50 per unit. Zelta Electronics incurs a fixed order placement cost of \$200 and an annual holding cost of 20% of each unit cost.
- (a) Calculate the Economic Order Quantity (EOQ) for both suppliers.
(8 marks)
- (b) Determine the action to be taken by Zelta Electronics based on **Q 3(a)**.
(8 marks)

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- Q4** ABC Pharmaceuticals is a company that produces a particular medication. The demand for this medication follows a normal distribution with a mean of 800 units per day and a standard deviation of 100 units. The supplier, Pharma Supp Ltd., takes 14 days to fill an order placed by ABC Pharmaceuticals' procurement team. Currently, the procurement team orders 15,000 units of the medication when the inventory on hand drops to 5,000 units.
- (a) Calculate,
- (i) Safety Inventory. (3 marks)
- (ii) Cycle Inventory. (3 marks)
- (iii) Average Inventory. (3 marks)
- (b) Illustrate the inventory profile for ABC Pharmaceuticals based on the answers above. (4 marks)
- Q5** Xylo Manufacturing Company, led by CEO Sarah Lim, decides to outsource its IT services to a third-party provider in an effort to streamline operations and reduce costs. However, after a few months of working with the third-party provider, Sarah Lim notices a decline in service quality and an increase in security breaches. Upon investigation, it becomes clear that the third-party provider is not meeting the agreed-upon service levels and is jeopardizing the company's IT infrastructure.
- (a) Discuss **TWO (2)** impacts of the decline in service quality and security breaches on the manufacturing company's operations and financial performance. (6 marks)
- (b) Examine **TWO (2)** risks associated with outsourcing IT services to a third-party provider. (8 marks)
- (c) Examine the **THREE (3)** strategies that can be taken by Sarah Lim to overcome the risks associated with outsourcing IT services to a third-party provider based on above answer. (12 marks)

- END OF QUESTIONS -

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