



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

MAY – JULY 2016 TRIMESTER

FACULTY OF COMMERCIAL

DEPARTMENT OF MARKETING AND MANAGEMENT

CMM 421: SUPPLY CHAIN MANAGEMENT

Date: JULY 2016

Duration: 2 Hours

INSTRUCTIONS: Answer QUESTION ONE AND ANY OTHER TWO Questions

- Q1. Assume that the top managers of Catholic University of Eastern Africa (CUEA) have proposed to apply supply chain management to achieve the primary objectives of CUEA namely low total cost of services, high level of quality education and fast response the need of end-product users and other major stakeholders. As a supply chain management expert, advice the board of directors or the top executives of CUEA what to consider for the following questions.
- i Identify the major entities or players of the supply chain? Draw the most effective supply chain diagram which can help to manage the supply chain effectively and efficiently to achieve its strategic objectives and to gain sustainable competitive advantage within the education industry. **(5 marks)**
 - ii Discuss what activities of supply management should CUEA apply to achieve its strategic objectives. **(5 marks)**
 - iii Explain how the managers of CUEA can forecast demand. **(5 marks)**
 - iv Discuss briefly which models should the managers apply to manage inventory? **(5 marks)**
 - v Discuss using a model how managers can improve quality of education and others service of CUEA. **(5 marks)**

- vi Outline how managers of CUEA can measure the supply chain performance. **(5 marks)**
- Q2. i Discuss briefly how an organization develops a supplier evaluation and certification program using weighted criteria evaluation system. **(10 marks)**
- ii Consider a hypothetical situation in which a company XYZ has the option to make or buy a part. Its annual requirement is 11, 000 units. A supplier is able to supply the part at \$ 7 per unit. The company estimates that its costs \$500 to prepare the contract with the supplier. To make the part, the company must invest \$25,000 in equipment and the company estimates that its cost \$ 5 per unit to make the part. Advice the company whether to make or buy and support your answer using diagram of buy – or- make break even analysis. **(10 marks)**
- Q3. i Discuss the Juran’s qualify trilogy. **(10 marks)**
- ii Blake, owner of Blakester’s speed pizza, a home delivery pizza operation keep track of customers complaints. For each pizza delivery, there are three possible causes of complaints. A late delivery a cold pizza or an incorrect pizza. Each week Blake calculates the rate of delivery defects per total pizza deliveries and then uses this information to determine his company’s six sigma quality level. During the past week, his company delivered 620 pizzas. His drivers received 16 late delivery complaints, 19 cold pizza complaints and 5 incorrect pizza complaints. Calculate the DPMO for Blakester’s speedy pizza. **(10 marks)**
- Q4. i What are the qualitative forecasting techniques? When are these methods more suitable? **(10 marks)**
- ii The Kuanton corporation purchase a component from a supplier who offer quantity discounts to encourage larger order quantities. The supply chain manager of the company wants to determine the optimal order quantity to ensure the total annual inventory cost is minimized. The company’s annual demand forecast for the item is 7290 units the order cost is 820 per order and the annual holiday rate is 25% The price schedule for this item is

Order quantity	Price percent
1 – 200	\$ 5
201- 500	\$ 4.5
501 and above	\$ 4

The two questions of interest here are

- i What is the optimal order quantity that will minimize the total annual inventory cost? **(5 marks)**
- ii What is the total annual inventory cost? **(5 marks)**

END