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KIBABII UNIVERSITY



UNIVERSITY EXAMINATIONS

SPECIAL/SUPPLEMENTARY EXAMINATION

2020/2021 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER
FOR THE DEGREE OF BACHELOR OF
COMMERCE**

COURSE CODE: BCP 312

COURSE TITLE: STRATEGIC SUPPLY CHAIN MANAGEMENT

DATE: 10/01/2022

TIME: 11.00AM – 1.00PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE (compulsory) and ANY OTHER TWO questions

QUESTION ONE

Case Study

Chua Cheng Manufacturing is a rapidly growing manufacturer of office equipment with facilities in China and the Philippines. A team of management consultants have been advising the company on ways of improving productivity. Their study was drawing to a close when the project manager from the consultancy was called to Chua Cheng's vice president of operations, Sit Yuen Foo, who explained: We like your suggestions for rescheduling operations to meet expected demand using less plant and equipment. Now can you do one final study for us? As we will be working with less cushion for safety, it is important that everything continues to work properly. We think that this, in turn, depends on our inventory. We keep a lot of items in the stores and would like some suggestions for improving performance. The consultant said that his final report was already suggesting this study. He had talked to the supplies manager for Chua Cheng's plants who described the present inventory control system as follows. We stock 25,000 different items which vary from paper clips to major spare parts for production equipment. There is not really any such thing as typical item. Demand ranges from zero to 100,000 units per year. Current stocks range from one (we carry the odd spare part for heavy equipment that might break down but is rarely used) to several hundred thousand (small items such as screws and brackets). Lead times vary from 15 minutes for items that bought in a local shop to over a year for specially designed imported equipment. The unit price ranges from almost nothing to \$250,000. The reorder price varies from almost nothing for local suppliers, to very large amounts when we need a specialised piece of equipment designed and delivered from Europe. Shortage costs range from almost nothing to very large sums for things that we absolutely must keep in stock. The current inventory system was installed 10 years ago and has been continually updated-with two complete revisions and many smaller adjustments. The system categorises items in a number of ways and deals with each category differently.

Firstly the system considers the item's importance:

- Five percent of items are essential and must be kept in stock whatever the cost.
- Twenty percent of items are important and have a notional service level of 97 per cent
- Fifty percent are ordinary items with a notional service level of 93 per cent.
- Twenty five per cent are low priority items with a notional service level of 80 percent.

A second classification of items looks at how long they had been stocked. For new items the expected demand is suggested either by departments requesting the item or by suppliers.

- When an item has been in stock for a few months, there is a short history of demand, and forecasts for future demand are made from average values over the last for 4 months.
- After 9 months, more historical data is available, and forecasting is switched to a more sophisticated method whose performance is constantly reviewed.

A third classification of items refers to their use.

- Stocks of heavily used items are reviewed at the end of every working day.
- Stocks of normally used items are reviewed at the end of every week
- Stocks of lightly used items are reviewed at the end of every month
- Stocks of sporadically used items are reviewed every time there is a withdrawal

• Stocks of items that have no recorded movement in the past year are considered for removal from stock. About 20 per cent of items are in each of these categories. The system records all transactions and generates a range of reports. For example, at the end of every working day, the computer lists the heavily used items and sends suggested purchases to the Procurement Department. The Procurement Department examines these suggestions the following day, makes any modifications they feel are necessary, transmits orders to suppliers and update associated records. Sit Yuen Foo feels that the system is working reasonably well. It is based on sound principles and the stocks seem to give little trouble, considering the complexity of a system containing \$20 million worth of inventory. The consultant's immediate problem is to prepare a proposal for an investigation of the system

Source: Monczka *et al* (2009) Purchasing & Supply Chain Management pg 413-414

Required:

- a) Explain the features that you think a reasonable inventory management system for Chua Cheng Manufacturing should contain. (8 marks)
- b) Explain two weaknesses that are prevalent in the inventory system in Chua Cheng. (6 marks)
- c) Explain any two improvements that you may suggest to the inventory system in Chua Cheng. (6 marks)
- d) Apart from ABC Analysis as a method used in the control of stock, what other technique/system should the company use (10 marks)

QUESTION TWO

- a) Ideally, a company is supposed to work towards holding little or no stock but practical considerations relating to the production process, availability of storage space and required customer service levels influence organisational policy as to the amount of stock held. Discuss four reasons why an organisation should not hold stocks (10 marks)
- b) Using an organization of your choice, discuss the role of IT as a tool for enhancing supply chain performance. (10 marks)

QUESTION THREE

- a) Consider the supply chain involved when a customer purchases a book at a bookstore. Identify the cycles in this supply chain and the location of the Push /pull boundary. (10 marks)
- b) Using a Kenyan example outline the supply chain or network of an organisation clearly bringing out the members of the chain up to the second tier. (10 marks)

QUESTION FOUR

- a) Illustrate the role of Information Technology in the supply chain. (10 marks)
- b) Explain how agile and lean supply chain has enhanced efficiency in supply chain management (10 marks)

QUESTION FIVE

a) Describe the concept of value as it relates to value analysis. Provide examples of how an organization can increase value to itself or to its customers. (10 marks)

b) Discuss the various tools used to control quality of goods in an organisation

(10 marks)