



**STRATHMORE BUSINESS SCHOOL**  
**BACHELOR OF SCIENCE IN SUPPLY CHAIN AND OPERATIONS MANAGEMENT**  
**END OF SEMESTER EXAMINATION**  
**SCM 3102: HEALTHCARE AND CHEMICAL SUPPLY CHAIN**

**Date:** Thursday, 28<sup>th</sup> July 2022

**Time:** 2 Hours

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**Instructions**

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

**QUESTION ONE**

**Read the case study below and answer the questions that follow**

**NGO essential medicines services in East Africa**

Two mission- run pharmaceutical supply services that are generally considered success stories are Kenya's Mission for Essential Drugs (MEDS) and Uganda's Joint medical Stores (JMS). A WHO- commissioned report presented the findings of analysis of key success factors and obstacles faced in running NGO pharmaceutical supply systems. Both systems are now largely self-sustaining, but they required-and continue to require some degree- an enormous amount of multidonor support.

Although operating in similar environments, MEDS established in 1986, and JMS, established in 1979, differ in where they source their products either locally or internationally, and what clients they serve, but both have efficient systems, producing 90% availability rates and competitive prices. The most important point is that both organizations maintain high staff motivation levels and provide a reliable pharmaceutical supply system for their customers. Both organizations voice a strong commitment to servicing the poor in their respective countries and achieve this goal through efficiency and maintaining their purpose. Both organizations are beginning to supply significant amounts of products to organizations in the neighbouring countries.

Although MEDS and JMS are clearly effective in contributing to increased access to medicines in their respective countries, this success evolved from and depended on decades of sustained commitment- financial, technical and political- from supportive donors. However, as it has for other essential medicine supply services in the region, the increase in demand for products has pushed MEDS and JMS to the limit of their current capacities, which will test their ability to maintain quality services.

- A. Taking into consideration the circumstances that MEDS and JMS faces, explain relevant steps that they may use in pharmaceutical demand planning. **(8 Marks)**

- B. As stated in the case, both MEDS and JMS are operating in similar environment having similar systems producing 90% availability rates. Explain five (5) other metrics that can be used by MEDS and JMS in performance measurement **(10 Marks)**
- C. Explain four (4) potential sources of wastes that may hinder MEDS and JMS efficiency in delivering efficient and effective services to their customers **(8 Marks)**
- D. Highlight four (4) reasons why we should worry about supply chains for medicines. **(4 Marks)**

### **QUESTION TWO**

- A. Nightingale Medical centre intends to float an open tender for supply, delivery, installation, testing and commissioning of operation theatre and intensive care equipment. Explain three (3) areas that should be included in the preliminary evaluation criteria and three (3) areas that should be included in the technical evaluation criteria **(12 Marks)**
- B. Using an appropriate model explain the roles of four (4) stakeholders in healthcare industry **(8 Marks)**

### **QUESTION THREE**

- A. Technology is an enabler in efficient and effective supply chain processes. Explain five (5) technologies that can be used in chemical and supply chain. **(10 Marks)**
- B. Medical tourism is the act of patients travelling abroad for the purpose of receiving better medical treatment, improve fitness and alternative care. With the help of a well labelled diagram, explain the medical tourism process **(10 Marks)**

### **QUESTION FOUR**

- A. Discuss three (3) aims of chemical and healthcare supply chain audits. **(6 Marks)**
- B. Using healthcare balanced score card (BSC) framework, highlight two (2) goals and measures. Diagram presentation is preferable. **(8 Marks)**
- C. Highlight six (6) traits representing the prerequisites for futuristic healthcare supply chain **(6 marks)**

### **QUESTION FIVE**

- A. One of the drivers of healthcare supply chain practices is monetary value which is the ratio of revenue to total cost. Explain two (2) ways in which this can be enhanced **(4 marks)**
- B. With Relevant examples, explain four (4) segments in the chemical industry. **(8 Marks)**
- C. Discuss the differences between make to stock and make to order in Chemical and healthcare industry **(8 Marks)**