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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FOURTH YEAR, SECOND SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(BUSINESS ADMINISTRATION)

Date: 17th April, 2023
Time: 11.30am –1.30pm

KPS 404 - CONTEMPORARY ISSUES IN INVENTORY MANAGEMENT

INSTRUCTIONS TO CANDIDATES

ANSWER **QUESTION ONE (COMPULSORY)** AND **ANY OTHER TWO** QUESTIONS

QUESTION ONE (30 MARKS)

PROBLEMS FACED BY NIKE IN INVENTORY MANAGEMENT AND SUPPLY CHAIN MANAGEMENT.

In the early 2000s, Nike had some major inventory management problems. The company lost around $100 million in sales due to these issues. It may be difficult to imagine that such a well-established corporation could have a massive operational failure like this, but they did. As they learned from this experience, inventory control can be difficult for a business of any size. Fortunately, following this failure, Nike developed an improved inventory management solution to solve their problems rapidly. Here's what happened to Nike and how the company recovered. In 2001, Nike implemented an updated version of its inventory management software. The idea of this newly implemented inventory control software was to help predict which products they would sell the most and thus prepare the right amount of supply to meet the demand. First, they would produce a demand forecast, and based on that forecast, they would prepare a manufacturing plan. That's how most big corporations (and some small businesses) make their operational business decisions. Here is the process in a nutshell.

Based on historical sales data of different products, and based on some market growth estimates, Nike would first prepare a demand forecast for different families of products. This demand forecast is then used to determine optimal inventory levels, reorder points, material lead times, etc. And the entire manufacturing plan for months is determined using these numbers produced by the inventory management software. In Nike's situation, however, they ran into some serious software implementation issues bugs, and data errors which resulted in incorrect demand forecast. The predictions the software made were totally off, so Nike didn't produce enough of certain products that consumers were interested in buying. Conversely, they overproduced other SKUs. This erroneous manufacturing plan eventually resulted in lost sales worth millions of dollars. Nike's case illustrates just how crucial it is to manage your inventory and your inventory management system properly, irrespective of whether you are a small, medium, or large business.

When choosing an <u>inventory management</u> solution it is extremely important to ensure the quality of software that your vendor provides. It is equally important to make sure that you enter all the requisite data and double-check everything! Especially if you are a small business owner and can't withstand a massive loss in sales.

Required;

a) Organizations carry stock for various reasons, from the illustration from the case study above. Give five such reasons why Nike would have considered carrying stoke.
                                                                                                                                                (5 marks)

b) Based on historical sales data of different products, and based on some market growth estimates, Nike would first prepare a demand forecast for different families of products, Stock kept in Nike's stores can be categorized into various classes. Explain briefly five such classes in any ordinary inventory.   (5 marks)

c) Nike ended up overproduced other SKUs with the aim of controlling their earnings and cashflow. This erroneous manufacturing plan eventually resulted in lost sales worth millions of dollars, Explain five advantages of variety reduction.
                                                                                                                                                (5 marks)

d) Nike didn't produce enough of certain products that consumers were interested in buying. Conversely, explain four determinants of stock holding policy within an organization.
                                                                                                                                                (5 marks)

e) In Nike situation briefly explain four ways of identifying slow moving inventory.
                                                                                                                                                (5 marks)

f) Organizations can operate using manual or electronic information systems for various uses. Explain four such uses of information systems and how it would improve the performance of Nike's case.   (5 marks)

QUESTION TWO (20 MARKS)

a) Discuss any five techniques of provisioning and inventory control.   (10 marks)

b) Discuss six advantages that a purchasing organization gains by using standardization.
                                                                                                                                                (6 marks)

c) Explain four methods that can be used to avoid carrying stock.
                                                                                                                                                (4 marks)

QUESTION THREE (20 MARKS)

a) Discuss the four components of the information systems.   (8 marks)

b) Discuss six types of information systems.   (6 marks)

c) Discuss six advantages of electronic point of sale (EPOS).   (6 marks)

QUESTION FOUR (20 MARKS)

a) Discuss the process of disposal of redundant, obsolete and scrap items.   (10 marks)

b) Discuss the process of issuing and receiving goods and tools.   (10 marks)

QUESTION FIVE (20 MARKS)

a) Discuss the various methods used in pricing stock.   (10 marks)

b) Discuss the operational research techniques used in stock control.   (10 marks)