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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR**  
**THIRD YEAR, FIRST SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

Date: 9<sup>th</sup> August, 2024  
Time: 11.30am – 1.30pm

**KPS 2302 MATERIALS MANAGEMENT**

**INSTRUCTIONS TO CANDIDATES**

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

**QUESTION ONE (30 MARKS)**

Read the Case Study below and answer the questions that follow:

**EFFICIENT MATERIALS MANAGEMENT AT MICRO WORLD CO.**

Micro World Co. (MWC) is a leading manufacturer of electronic components for consumer electronics. The company has been experiencing rapid growth in recent times, which has put pressure on her materials management processes. Recently, MWC faced issues with inventory shortages, overstocking, and delays in production due to inefficient materials management practices in the company. The company decided to implement a new materials management system to streamline operations, improve inventory control, and enhance overall efficiency in all her processes.

The key Components of the New inventory management System included Just-In-Time (JIT) Inventory used to minimize inventory holding costs and reduce waste. Automated Inventory Tracking using RFID technology to track materials in real-time. Supplier Relationship Management (SRM) for strengthening relationships with key suppliers to ensure timely delivery of goods and better contract terms for goods and services supplied. Data Analytics for leveraging data analytics to forecast demand accurately and optimize inventory levels and regular training programs for employees to adapt to new technologies and processes. In order to have a smooth implementation of the inventory management system, the new system was rolled out in phases over six months.

Initial training sessions were conducted for key staff, followed by a pilot program in one of the production units. After successful implementation in the pilot unit, the system was gradually introduced to other units. The results of implementing the new inventory system posted very impressive results for MWC that included a reduction in the Inventory holding costs by 40%, instances of stockouts decreased by 45%, production delays due to materials shortages were cut by 55% and improved supplier relationships resulted in better pricing and more reliable deliveries among many other benefits

**Based on the above case study. Answer the following questions below:**

- a) Most manufacturers suffer many operational challenges if they don't deploy Best Practices in manufacturing. Discuss the material management challenges faced by Micro World Co (MWC) before implementing the new materials management system.  
(5 Marks)
- b) Just In Time is a key strategy used in control and management of inventory. Explain how Just-In-Time (JIT) inventory contribute to the improvements seen at MWC.  
(5 Marks)
- c) With the implementation of the new inventory management system by MWC, automation played a critical role in the improvements seen by MWC. Explain the role played by the automated inventory tracking in enhancing materials management at MWC.  
(5 Marks)
- d) The relationship between MWC and her suppliers is a strategic engagement that positively contributes to her bottom line. Describe how Supplier Relationship Management (SRM) improved supplier interactions and business outcomes for MWC.  
(5 Marks)
- e) Big data analytics is very crucial in today's business. Discuss the benefits that MWC gained by leveraging data analytics for demand forecasting and inventory optimization.  
(5 Marks)
- f) There are many efforts made to improve performance, these efforts may not bear fruits unless employee development is considered. Explain why employee training was important for the successful implementation of the new materials management system at MWC.  
(5 Marks)

**QUESTION TWO (20 MARKS)**

- a) A group of supply chain management students are visiting Big Mark Enterprises. The students are here to learn practical aspects of Materials Management. Ms Queen, the Production Manager is preparing a presentation for the students. Discuss SIX Principles of Effective Materials Management that Ms Queen should include in her training pack  
(6 Marks)
- b) The Factory Manager at Man Well PLC, Ms Grace is expecting a group of supply chain students who are visiting the newly constructed Man Well Distribution Centre to increase their appreciation of supply chain management. Discuss SIX key factors that Ms Grace should explain to the students to have influenced management decision on the location of the Man Well Distribution Centre.  
(6 Marks)
- c) The new Demand Planning Manager is unable to review the factors that influence the Demand Planning within the organization given the industry dynamics. Kenyanitto a Supply Chain Consultant has been contracted to help with the review of these factors. Discuss four potential factors that influence Demand Planning that Kenyanitto must recommend for implementation in the demand planning process.  
(8 Marks)

### **QUESTION THREE (20 MARKS)**

- a) Kings Matters Ltd is reviewing and categorizing the different categories of goods received at her warehouse. Queen Mnyanzi the Inventory coordinator has been tasked to categorize all the goods expected at the warehouse. Discuss EIGHT different categories of goods that Kings is likely to receive in their warehouses. (8 Marks)
- b) Mingle Jobs takes the exercise of record keeping very seriously. Discuss different ways in which record keeping can be maintained in a warehouse. (6 Marks)
- c) Maka is facing a constant challenge of surplus inventory. No one in the organization seem to understand why there is always excess inventory. A consultant has been hired to review the situation at Muka and make recommendations. Explain the common causes of surplus materials that the consultant is likely to come across in the course of his service to Muka. (6 Marks)

### **QUESTION FOUR (20 MARKS)**

- a) Inventory challenges are experienced in different ways and are managed in different ways. Discuss common Solutions to Overcome Inventory Management Challenges that an organization should always put in place to minimize the risks of managing inventory. (6 Marks)
- b) Patrick the Production Manager with Mali Mali wants to incorporate Production Planning in the manufacturing process. Clearly outline FOUR limitations of production planning that he needs to appreciate in his plans. (8 Marks)
- c) In recent times, managing a warehouse has become very complex. Discuss Emerging trends in warehousing that Warehouse Managers have to deal with in their daily operations. (6 Marks)

### **QUESTION FIVE( 20 MARKS)**

- a) Goods receipt in a warehouse is a specialized activity that must be undertaken with a lot of diligence. Martha is the Warehouse Manager at Kimberly Matters. Discuss FOUR factors that Martha should consider when receiving goods in the warehouse. (8 Marks)
- b) To avoid purchasing unwanted goods in the organization. Organizations use a Purchase Order which they issue to suppliers to confirm that they want the supplier to supply them with goods or services. Makuna Procurement Standard Operating Procedure details that no goods or services can be procured without issuance of a purchase order to the supplier. Explain the reasons why companies use Purchase Orders to communicate their requirements to suppliers of goods and services. (6 Marks)
- c) Materials used for production are kept in a warehouse until the time they are required in production. Many losses can occur during the time when materials are kept in a warehouse. Paul Mark is the Chief Operations Officer for Mint Mint Co. He wants a warehouse constructed but the shareholders of the company do not see the need for having the warehouse. Discuss the functions of a warehouse that Paul Mark should include in his Board Paper which the CEO is to present to the shareholders to convince them on the need to construct a new warehouse. (6 Marks)