041605T4SCM

SUPPLY CHAIN MANAGEMENT LEVEL 5

BUS/OS/SC/CR/03/5/A

DISTRIBUTE STORED GOODS

July/August 2024

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of two sections; **A** and **B.**
2. Answer **ALL** the question as guided in each section.
3. Marks for each question are as indicated in the brackets.
4. You are provided with a separate answer booklet to answer the questions.
5. Do not write in this question paper.

This paper consists of FOUR (4) printed pages

Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing

SECTION A: [40 MARKS]

Answer all questions in this section

1. Distribution involves planning and optimizing the process of delivering goods to customers from production facilities. Outline FOUR operational decisions involved in distribution management. (4 Marks)
2. A vertical marketing system (VMS) is a distribution channel structure in which producers, wholesalers, and retailers act as a unified system. List THREE major types of VMS. (3 Marks)
3. Desirable distribution channel is a channel that will meet customers' needs and be competitive. Outline FIVE stages of designing such a distribution channel. (5 marks)
4. The importance of distribution networks in efficient delivery of goods cannot be overemphasized. Highlight FOUR components of an efficient distribution network. (4 marks)
5. The management of vehicle fleet for distribution can include a range of functions. List FOUR of these functions. (4 marks)
6. Optimizing route schedule in distribution planning can be a complex task depending on the context and constraints involved. Enumerate FOUR pathways to optimizing route schedules. (4 marks)
7. Decisions on the mode of transport to use in the distribution of goods consider various perspectives. Highlight FIVE factors that could influence the selection of the mode of transport. (5 marks)
8. Physical distribution often refers to that part of supply chain that deals with the delivery of goods and services from the production to end-user customers. State FOUR activities of physical distribution management. (4 Marks)
9. Transport Intelligent Systems (TIS) technologies is the integration of advanced technologies and information systems to improve transportation efficiency, safety, sustainability, and user experience. Highlight FOUR examples of technologies comprising TIS. (4marks)
10. Water transportation is one of the most widely used mode of transport by most shippers due to its cost effectiveness especially with regard to bulky and heavy cargo. Outline THREE different kinds of routes used by waterway shipping. (3marks)

SECTION B: [60 MARKS]

Answer question 11 and any other two questions in this section.

Read the case below and answer the questions that follow:

FMCG Case Study: Nestle

A multinational food and beverage firm called Nestle makes a variety of goods, such as coffee, chocolate, and baby food. Managing the company's distribution channels was difficult, especially in emerging regions with its numerous small merchants and underdeveloped infrastructure.

Nestle created a distribution management system that gave them end-to-end insight and control over its distribution routes in order to overcome these difficulties. Nestle was able to control inventory levels, track shipments, and keep an eye on distribution efficiency thanks to the system.

Nestle was able to enhance product availability, lessen stock-outs, and streamline its supply chain as a result. The business also obtained knowledge about its distribution systems, which helped it spot chances to boost productivity and cut expenses.

Required:

11.

a. Describe FIVE possible distribution channels that Nestle could use to ensure their goods reach to end-user customers. (10 marks)

b. Discuss FIVE reasons by Nestle would be keen on incorporating wholesaling intermediaries in its distribution channel. (10 marks)

12.

a) When distributing goods to customers, it is important to optimize their handling. One way to achieve this is by proper packaging. Explain FIVE benefits of packaging in distribution logistics. (10marks)

b. Distribution companies may use Different modes of transportation in their distribution networks. Discuss FIVE benefits of using intermodal transportation. (10 marks)

13.

a) Vehicle routing problem (VRP) refers to a combination of problem optimization involving the determination of optimal routes for a fleet of vehicles to serve a set of customers. Explain FOUR characteristics of VRP. (8marks)

b) Vehicle monitoring systems are structured to enable the capturing of information on various aspects of fleet usage, maintenance and operations. Describe SIX vital information that monitoring systems should capture. (12 marks)

14.

a) For selection of the optimal transportation method, cargoes are divided into categories in distribution logistics. Discuss FIVE categories of goods that could enhance efficient transportation. (10 marks)

b) Distribution logistics involves documentation that safeguard the integrity and transparency of the process. Explain FIVE documents used in distribution management. (10 Marks)