INTERNATIONAL DIPLOMA IN LOGISTICS AND TRANSPORT

TRANSPORT OPERATIONS

DIP03

JUNE 2023

Instructions to Candidates

- Duration of examination: **3 HOURS**
- **Answer Question 1(Compulsory) in Section A and any 3 Questions in Section B**
- Questions may be answered in any order
- Allocation of marks is indicated along each question
- Credit will be given for citing relevant examples
- Write legibly

SECTION A **(40 marks)**

CASE STUDY

TESCO

Tesco is the UK's largest food retailer, with a sales turnover annually of more than €67.5billion.

While it has some 638 stores in central Europe, and some 636 in the Far East, most are in the United Kingdom and Northern Ireland, where it has nearly 1,800. This

number has increased rapidly as Tesco entered the convenience store market with deals such as the Tesco Express alliance with Esso entered to run grocery shops at petrol stations. The product range held by the stores has grown rapidly in recent years, and currently stands at 65,000 stock-keeping units (skus) depending on the size of the store as Tesco broadens its presence in the “non-food” market for electrical goods, stationery, clothing and the like. This massive range is supported by 3,000 suppliers, who are expected to provide service levels (correct time and quantities) of at least 98.5% by delivering to Tesco within half-hour time “windows”. Volumes are equally impressive. In a year, some 2.5billion cases of product are shipped from suppliers to the stores.

Tesco states that its core purpose is “to create value for customers to earn their life-time loyalty”. Wide product range and high on-shelf availability across that range are key enablers of that core purpose.

So how do you maintain availability of so many materials of such a vast organisation? Logistics is about material flow, and about information flow. Let us look at how Tesco deals with each of these in turn.

An early reform for supermarket operation was to have suppliers deliver to a distribution centre rather than to every store. During the 19980s, distribution to retail stores was handled by 26 depots. These operated on a single-temperature basis, and were small and relatively inefficient. Delivery volumes to each store were also relatively low, and it was not economic to deliver to all stores each day. Goods that required temperature-controlled environments had to be carried on separate vehicles. Each product group had different ordering systems. The network of depots simply could not handle the growth in volumes and the increasingly high standard of temperature control. A new distribution strategy was needed.

Under the “composite” distribution system, many small depots with limited temperature control facilities were replaced by composite distribution centres (called regional distribution centres, RDCs), which can handle many products at several temperatures ranges. The opportunity is to provide a cost-effective daily delivery service to all stores. Typically, a composite distribution centre can handle over 60million cases per year on a 15-acre site. The warehouse building comprises 25,000 square meters divided into three temperature zones: frozen (-25◦C), + 2◦C (chilled) and + 12◦C (semi-ambient).

Each distribution centre (DC) serves a group of between 100 and 140 retail stores. Deliveries are made at agreed, scheduled times. Ambient goods such as cans and clothing are delivered through a separate grocery distribution network which relies on a stocked environment where orders are picked by store. This operation is complemented by a strategically located trunking station which operates a *pick* to *zero* operation for fast-moving grocery on merchandise units that can be placed directly on the shop floor

So much for the method of transporting goods from supplier through to the stores, but how much should be sent to each store? With such a huge product range today, it is impossible for the individual store to reorder across the whole range (store-based ordering). Instead, sales of each product line are tracked continuously through the till by means of electronic point of sale (EPOS) systems. As a customer's purchases are scanned through the bar code reader at the till, the sale is automatically recorded for each sku. Cumulative sales are updated every four hours on Tesco Information Exchange (TIE). This is a system based on internet Protocol that allows Tesco and its suppliers to communicate trading information. The aim of improved communication is to reduce response times from manufacturer to stores and to ensure product availability on the shelf. Among other things, TIE aims to improve processes for introducing new products and promotions, and to monitor service levels.

Based on the cumulative sales, Tesco places orders with its suppliers by means of electronic data interchange (EDI). As volumes and product ranges increased during the 1990s, food retailers such as Tesco aimed to destock their distribution centres by ordering only what were needed to meet tomorrow's forecast sales. For fast-moving products such as types of cheese and washing powders, the aim is *day* 1 for *day* 2: that is, to order today what is needed for tomorrow. For fast-moving products, the aim is to pick to zero in the distribution centre: no stock is left after store orders have been fulfilled and deliveries to the stores are made as soon as the product is picked, which increases the stock availability for the customer. The flow of the product into the distribution centre is broken into four waves and specific products are delivered in different cycles through the day. This means that the same space in the distribution centre can be used several times over.

Question 1

a. Describe the key logistics processes at Tesco. **(20 marks)**

b. Discuss what you consider to be the main logistics challenges in running the Tesco operation. **(20 marks)**

SECTION B

Answer any THREE questions.

Question 1

'Logistics management plays a pivotal role in any business transaction in both Commerce and industry'.

Discuss by giving examples how your organisation can use, win and retain customers through Logistics. **(20 marks)**

Question 2

Transport and Logistics are the life blood of every economy. Discuss. **(20 marks)**

Question 3

'The management of transport operations encompasses aspects of the logistics chain and is at the heart of the entire service enterprise. The practice may be viewed as a science focused on the process inputs resulting to outputs thereby satisfying customer requirements'.

Explore the key drivers of change in transport and logistics operations. **(20 marks)**

Question 4

As a newly appointed Transport and Logistics manager at Lupane State University, suggest any cost cutting measures that can be implemented to ensure competitiveness in the Logistics and Transport Department. **(20 marks)**