



**The Chartered  
Institute of Logistics  
and Transport**

## **CERTIFICATE IN LOGISTICS AND TRANSPORT**

### **GREEN LOGISTICS**

**09-L3**

**June 2023**

#### **Note to Candidates**

Candidates are advised to spend NOT more than 60 minutes in Section A and not more than 30 minutes on each question in Section B.

#### **Instructions to Candidates**

- Duration of examination: **2.30 hours**
  - **Answer ALL Questions in Section A and any THREE 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.
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#### **SECTION A: Case Study (Compulsory)**

**(40 marks)**

##### **Reducing environmental impacts of freight transport sector:**

A well-organized freight transport system is essential for economic development and it offers a wide range of benefits such as accessibility to goods and services. However, it is obvious that it also causes serious problems in form of negative impacts on

environment and human health. Motor vehicles emit a large amount of pollutants and freight transport sector is a significant contributor to air pollution at local as well as regional and global levels. In addition, transport is a major source of noise, and gives rise to other environmental problems, such as water pollution and fragmentation of land.

The transport system in the Czech Republic has gone through substantial changes since 1990, mostly due to political and economic changes in the country. During this period, the environmental performance of many sectors, such as industry and energy has improved; however, it is not so in the case of freight transport. The demand for

freight transport in the Czech Republic has been steadily increasing during the latest years and demand is expected to continue growing. Furthermore, the most polluting road transport sector has become overwhelmingly dominant. There are several reasons for this development, such as current trends in production and logistics and slow adoption of the railway sector to competition from more flexible and reliable road sector. Moreover, the external costs of the road sector are significantly higher than external costs of the rail sector, which makes the road favoured at the expense of rail.

For the reduction of environmental damage caused by road freight transport, there is a need for strong emission regulations, implementation of new technologies as well as solutions in order to reduce the demand for transport. Those measures are important in working towards sustainable transport, however, they are unlikely to divert the current development in emission trends. In order to attain a sustainable freight transport sector, it is necessary to increase the share of railways on the freight transport market. Measures aiming at improving efficiency and opening up the freight railway market to competition will make this sector more competitive in comparison to the road freight sector. However, because the forces driving the modal slant towards road transport are powerful, more efficient policy instruments internalizing the external costs of road transport need to be implemented.

**Source:** <https://www.lumes.lu>

- a) Using examples explain the following terms as they apply to green Logistics;
- i. Fragmentation of Land **(2 marks)**
  - ii. Air Pollution **(2 marks)**
  - iii. Environmental performance **(2 marks)**
  - iv. Sustainable freight transport **(2 marks)**
  - v. Strong emission regulations **(2 marks)**
- b) List FIVE consequences of air pollution **(5 marks)**
- c) What are the FIVE effects of air pollution on the environment. **(10 marks)**
- d) Discuss why in Zimbabwe road freight is favoured at the expense of rail. **(10 marks)**
- e) Explain what is meant by climate change? **(5 marks)**

## **SECTION B**

**(Answer any THREE questions) (60 marks)**

### **Question 1**

Identify any FOUR modes of transport you are familiar with and show clearly their adverse impact on the environment. **(20 marks)**

### **Question 2**

Discuss how COVID 19 affected green logistics programs in Zimbabwe. **(20 marks)**

### **Question 3**

With the aid of a diagram, show how the three elements of green logistics are related.

**(20 marks)**

### **Question 4**

'Green energy looks set to be part of the future of the world, offering a cleaner alternative to many of today's energy sources'. Explain any FOUR most common sources of green energy. **(20 marks)**