



The Chartered  
Institute of Logistics  
and Transport

INTERNATIONAL DIPLOMA IN LOGISTICS AND TRANSPORT  
TRANSPORT PLANNING  
DIP04

SEPTEMBER SUPPLEMENTARY EXAMINATION 2024

**Instructions to Candidates**

- Duration of examination: **3 hours**
- **Answer Section A Question 1 (Compulsory) and any THREE questions**
- 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 Compulsory**

**(25 marks)**

**Question 1**

**CASE STUDY**

**Road construction contributes significantly to traffic increase – Stuttgart**

According to German Minister of Transportation, traffic demand does not increase with road infrastructure. Rather, it's claimed that improved road infrastructure and the promotion of public transport systems both decrease fuel consumption, thereby contributing to environmental protection.

For a 2km 4-lane highway projected in Stuttgart, an overall time saving of 5 million hours per year was calculated. Motorists spend 93 million hours per year on Stuttgart's roads and car traffic in the city consumes 302,500 tonnes of fuel a year (Minister of Nutrition, Agriculture, Environment and Forestry, Baden-Wuerttemberg 1986). The highway project would, therefore, boost road traffic with respect to the overall traffic in Stuttgart by as much as approximately 5%. Fuel consumption would increase by roughly 44 tonnes per day.

As it is assumed that the official calculations are over-estimated, actual time savings within the CBA framework, the actual increase in traffic and fuel consumption is probably less than 44 tonnes per day. However, fuel consumption will increase as a result of new highways. Decrease in fuel consumption demonstrated in CBA is under-estimated.

Extrapolating from this one road project in Stuttgart to all projects under consideration in Germany, it is estimated that the annual growth induced by road construction presently is approximately 1/3 of total growth in traffic (in Germany). Road infrastructure improvement is, therefore, one of the major causes of traffic increase in general.

(Source: *Whitelegg, J. and Hag, G., (2003). World Transport: Policy and Practice Earthscan.*)

Critically evaluate the above case study in relation to the effectiveness of the proposal for reducing traffic levels. **(25 marks)**

## **SECTION B**

### **Answer any THREE questions**

'In relation to transport, it can be argued that lack of access to effective transport resources can impact on the extent to which individuals can access health care facilities, local job markets and leisure activities'. Discuss. **(25 marks)**

#### **Question 2**

Explain why it is important to identify and address traffic issues early in the planning process. **(25 marks)**

#### **Question 4**

Explain the potential of achieving sustainable mobility and transportation in a society. **(25 marks)**

#### **Question 5**

Explain the term 'sustainability' and outline the key concepts behind the term sustainable development. **(25 marks)**

#### **Question 6**

- a) Critique the relationship of sustainability to land use distribution. **(15 marks)**
- b) Illustrate by aid of a table, land use measures that can contribute to a Sustainable Transport. **(10 marks)**