



**MODULE : TRANSPORT ECONOMICS 2A
SUPPLEMENTARY EXAM**

CODE : TRE12A2

DATE : JULY 2018

DURATION : 180 MINUTES

TOTAL MARKS : 160 MARKS

**EXAMINER : MRS E KRIEL
MS S NABEE**

MODERATOR : DR N PISA

NUMBER OF PAGES : 8

INSTRUCTIONS TO CANDIDATES:

- Answer all the questions
- **Answer Section B and Section C in different answer books**
- Question papers must be handed in.
- This is a closed book assessment.
- Read the questions carefully and answer only what is asked.
- Number your answers clearly.
- Write neatly and legibly
- Structure your answers by using appropriate headings and sub-headings.
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

SECTION A – MULTI-CHOICE QUESTIONS**[45 MARKS]****SECTION B****[75 MARKS]****URBAN TRANSPORT****QUESTION 1****(15 Marks: 15 Min)**

Despite the importance of efficient urban transport in cities, there are a number of factors which prevent it from playing an optimal role. Efficient cities are vital for economic progress however various problems are present. (UJ, 2017)

Identify and describe 5 (five) manifestations of urban transport problems.

QUESTION 2**(10 Marks: 10 Min)**

“The plight of rural people has been highlighted by numerous policy studies and considerable public awareness has been created via the media.” (Rural Transport Strategy for South Africa, 2007:5)

Summarise the strategic challenges of rural transport as identified in the Rural Transport Strategy for South Africa.

QUESTION 3**(20 Marks: 20 Min)**

Briefly explain the steps involved in the evolution of transport systems.

QUESTION 4**(30 Marks: 30 Min)**

Co-ordination of public transport is essential to create sustainable cities for people. To this effect administration is also critical.

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| 4.1 | Summarise the role of a transport authority in terms of formal public transport | (5) |
| 4.2 | Define the most common types of urban movements | (5) |
| 4.3 | Describe the defining principles of a sustainable city for the future | (20) |

SECTION C**[40 MARKS]****RAIL TRANSPORT****QUESTION 1****(10 Marks: 10 Min)**

1.1 Name the seven (7) transport cost externalities of rail transport (7 marks)

1.2 Discuss congestion costs in detail. (3 marks)

QUESTION 2**(15 Marks: 15 Min)**

You are a railway operator and had contract to move 20-ton steel coils from a steel mill to a vehicle manufacturer. You charged about R3000 for the transport of one steel coil. Owing to poor service levels (specifically late consignments, slow throughput time, inaccurate documentations and the unfriendly behaviours of your operational and marketing people to the steel mill's employees), The business was lost to a road transport operator. Upon investigation you determine that the road transport operator charges R4500 per steel coil for the same and you are quite surprised by this. Why will the steel mill be prepared to pay a higher tariff? You eventually determine that more safety stock is required to be held in inventory due to the late deliveries, that more cycle stock is necessary because of the long throughout times, and that the administration cost is high due to errors in documentation. You are able, however, to determine what the additional costs per steel coil would be if rail is used rather than road. In other words, you were able to determine the duration and levels of higher steel coil inventory, the costs of holding this inventory and the additional staff and processes required to deal with the railway. You are able to calculate this cost and knowing the total number of steel coils transported you can express the cost as an additional charge per coil. You determine that under the worse-case scenario, the additional cost is around R1000 per steel coil.

2.1 You are still surprised after doing this calculation. Why would this have happened, i.e. why did you still lose the business? (5 marks)

2.2 Which internal processes will you launch to rectify the situation? (5 marks)

2.3 Which external processes will you follow to rectify the situation? (5 marks)

QUESTION 3**(15 Marks: 15 Min)**

Discuss the Gautrain as a rapid rail system in Gauteng. Expand your discussion to include the possibility of expanding the same model to other major metropolitan areas in South Africa.

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