UNIVERSITY
OF
JOHANNESBURG

MODULE   :   TRANSPORT ECONOMICS 1A
                    SUPPLEMENTARY EXAM

CODE   :   TRE11A1

DATE   :   JULY 2018

DURATION   :   120 MINUTES

TOTAL MARKS   :   100 MARKS

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EXAMINER   :   DR N PISA

MODERATOR   :   MR GJ HEYNS

NUMBER OF PAGES :   6 PAGES

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INSTRUCTIONS TO CANDIDATES:

- Answer all the questions
- 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   **[30 MARKS]**

SECTION B - LONG QUESTIONS   **[70 MARKS]**

QUESTION 1   **(15 MARKS)**
The link between freight transport levels and economic wealth has never been in question, as the two are highly correlated. However, there remains questions over the direction of causation between the two variables. Discuss the supply led and the demand led models of economic development and transport.

QUESTION 2   **(20 MARKS)**
The determinants of price elasticity of demand are factors that determine the extent to which consumers in the market are price sensitive. Discuss the determinants of price elasticity of transport demand.

QUESTION 3   **(10 MARKS)**
The table below shows information on the production of tyres. Assume that the price per unit of the variable factor of production (L) is R20 and the price per unit of the fixed factor of production (K) is R5.

Units of Fixed Factor (K)	Units of Variable Factor (L)	Total Product (Q)
10	0	0
10	1	2
10	2	5
10	3	12
10	4	15
10	5	16

Populate the above table in you answer booklet, add columns to the table and calculate the values for the following: (10 marks)
  i.   Average Product of Labor (AP_L),
  ii.   Marginal Product of Labor (MP_L),
  iii. Total Variable Cost (TVC),
  iv.   Total Fixed Cost (TFC),
  v.   Total Cost (TC),
  vi.   Average Variable Cost (AVC),
  vii. Average Fixed Cost (AFC),
  viii. Average Total Cost (ATC), and
  ix.   Marginal Cost (MC).

QUESTION 4   **(10 MARKS)**
You are now ready to play the part of the manager of the public transit system. Your finance officer has just advised you that the system faces a deficit. Your board does not want you to cut service, which means that you cannot cut costs. Your only hope is to increase revenue. Would a fare increase boost revenue?

You consult the economist on your staff who has researched studies on public transportation elasticities. She reports that the estimated price elasticity of demand for the first few months after a price change is about −0.3, but that after several years, it will be about −1.5.
a. Explain why the estimated values for price elasticity of demand differ.(1)
b. Compute what will happen to ridership and revenue over the **next few months** if you decide to raise fares by 5%.(4)
c. Compute what will happen to ridership and revenue over the **next few years** if you decide to raise fares by 5%. (4)
d. What happens to total revenue now and after several years if you choose to raise fares? (1)

QUESTION 5   **(15 MARKS)**
Describe the assumptions of perfect competition and explain how perfect competition contributes to allocative efficiency.
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