

UNIVERSITY OF SWAZILAND

DEPARTMENT OF ECONOMICS

FINAL EXAMINATION PAPER 2006/07

TITLE OF PAPER: TRANSPORT ECONOMICS

COURSE CODE: ECON 423

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS: **1. ANSWER FOUR QUESTIONS: TWO QUESTIONS FROM SECTION A, AND TWO QUESTIONS FROM SECTION B.**
2. ALL QUESTIONS CARRY EQUAL MARKS, OF 25 EACH.

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

SECTION A**QUESTION 1**

Discuss the advantages and disadvantages of each of the following modes of transport: - Road, Railway, and Air. It will be advisable to make some comparisons, in your discussion, between these modes.

(25)

QUESTION 2

- (i) Discuss any four factors that affect the demand for transport. **(10)**
- (ii) Why is it important to understand the pattern of the demand for car ownership? **(5)**
- (iii) Discuss any other two factors affecting demand for transport besides the price of transport. **(10)**

QUESTION 3

- (i) Discuss three benefits of privatisation in the context of transport. **(6)**
- (ii) Discuss any three factors that affect crash costs. **(9)**
- (iii) Transport is considered to be a major contributor to environmental impacts. Discuss any two impacts caused by transport? **(10)**

QUESTION 4

- (i) Explain how demand can be used in pricing transportation services? **(10)**
- (ii) Marginal cost pricing in transportation may result the supplier to incur financial loss. Explain why? **(7)**
- (iii) Under what objectives would marginal cost pricing in transport be much helpful. Support your answer with an example. **(8)**

SECTION B**QUESTION 5**

- (i) Describe the two types of traffic congestion. **(5)**
- (ii) Discuss three; negative and positive, impacts of traffic congestion. **(15)**
- (iii) Give two reasons why building more roads does not solve the congestion problem. **(5)**

QUESTION 6

Swazi Oxy supplies gas to the three campuses of the University of Swaziland. The company purchases the gas from two companies: Southern Gas and Northern Gas. Gas demands for the three campuses are: Kwaluseni 400 units, Luyengo 200 units; and Mbabane 300 units. Contracts have been entered into to provide the following quantities: Southern Gas 500 units, and Northern Gas 400 units. The distribution costs per unit (in Emalangeneni) are as follows:

| FROM | TO | | |
|---------------------|------------------|----------------|----------------|
| | Kwaluseni | Luyengo | Mbabane |
| Southern Gas | 10 | 20 | 15 |
| Northern Gas | 12 | 15 | 18 |

- a) Develop a network representation of this problem. **(10)**
- b) Develop a linear programming model that can be used to minimize the total distribution costs; make sure you define the variables in your model. **(15)**

QUESTION 7

- (i) The planning process for projects requires a number of stages to be undertaken. Describe the stages involved. **(18)**
- (ii) Discuss the process a rational decision maker would follow. How can you advise one using this process on what type of car to purchase? **(7)**

QUESTION 8

- (i) Discuss any three functions that transport can play in the economic development of a country? **(9)**
- (ii) Congestion charging in some cities around the world, e.g. London, has been introduced in an effort to reduce traffic congestion. Discuss three other methods other than congestion charging that can be used to reduce traffic congestion. **(9)**
- (iii) How does the JIT technology help in the case of perishable goods such as milk or newspaper? **(7)**