

QUESTION 5

A certain Company imports its products from two ports: Maputo and Durban. Shipments of its products are made to customers in Manzini, Mbabane, Nelspruit and Piggs Peak. The supply at each port, customer demands, and shipping costs per product from each port to each customer are as follows:

PORT	CUSTOMERS				Port Supply
	Manzini	Mbabane	Nelspruit	Piggs Peak	
Maputo	2	6	6	2	5000
Durban	1	2	5	7	3000
Customer Demand	1400	3200	2000	1400	

- (i) Develop a network model of the distribution system. **(10)**
- (ii) Develop a linear programming model for minimising the transportation costs. You should define the variables in your model. **(15)**

QUESTION 6

- (i) Discuss two actions for reducing congestion under Travel Demand Management (TDM). **(10)**
- (ii) How can the Government recover the costs of constructing the roads in a country? **(5)**
- (iii) Discuss four ways in which transport contributes to the economic development of a country. **(10)**

QUESTION 1

- (i) Define recurring traffic congestion. **(2)**
- (ii) Discuss two ways in which recurring traffic congestion occurs. **(4)**
- (iii) Discuss two, both negative and positive, impacts of traffic congestion.
(10)
- (iv) Give two reasons why building more roads does not solve the congestion problem. **(4)**
- (v) Discuss the two (2) actions that can be taken to reduce traffic congestion under the Transport System Management strategy. **(5)**

QUESTION 2

- (i) Discuss four reasons that caused the change in the transport planning process from the approach used in the past fifty or more years. **(10)**
- (ii) The planning process for projects requires a number of stages to be undertaken. Describe the stages involved. **(15)**

QUESTION 3

- (i) Discuss any three decision making models in transport. **(15)**
- (ii) How can you advise one using the rational decision making model on what type of a car to purchase? **(10)**

QUESTION 4

Discuss how transport improvements can stimulate the virtuous cycle of economic development. **(25)**

UNIVERSITY OF SWAZILAND

DEPARTMENT OF ECONOMICS

FINAL EXAMINATION PAPER 2013/14

TITLE OF PAPER: TRANSPORT ECONOMICS

COURSE CODE: ECON 426

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

- 1. ANSWER FOUR QUESTIONS**
- 2. ALL QUESTIONS CARRY 25 MARKS EACH.**

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