



**STRATHMORE BUSINESS SCHOOL**  
**BACHELOR OF SCIENCE IN SUPPLY CHAIN & OPERATIONS MANAGEMENT**  
**END OF SEMESTER EXAMINATION**  
**SCM 3103: ADVANCED LOGISTICS AND TRANSPORTATION MANAGEMENT**

**Date:** Friday, 5<sup>th</sup> August 2022

**Time:** 2 hours

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**Instructions:**

1. This examination consists of **FIVE** questions.
2. Answer Question **ONE (COMPULSORY)** and any other **TWO** questions.

**QUESTION ONE (30 MARKS)**

- a) Logistics has an important role because it consumes the biggest part of capital and supports the flow and movement of many economic transactions. Discuss three (3) key strategic decisions in logistics and transportation management.  

(6 marks)
- b) A Transport Manager would like to transport a consignment to various parts of the country. Advise the manager on the five (5) types of questions, he/she needs to respond to in the design and operation of the logistics.  

(10 marks)
- c) As a warehouse manager you have noticed that the warehouse output has been decreasing month on month and the employees are getting demotivated. Propose five (5) strategies that you can use to improve the productivity of the employees.  

(10 marks)
- d) In your own words, explain the term “Heuristics” citing two examples in logistics system.  

(4 marks)

**QUESTION TWO (20 MARKS)**

- a) Transportation represents one of the most important human activities worldwide as it allows us to mitigate the constraint of geography. List the four (4) core components of transportation.  

(4 marks)
- b) Describe the three (3) basic families of objects in a logistics system.  

(6 marks)
- c) A company is preparing a teambuilding for 500 employees. The company who is providing the transportation has 8 buses of 50 seats each and 10 buses of 40 seats, but only has 9 drivers available. The rental cost for a large bus is \$900 and \$700 for the small bus. Using logistics linear programming, calculate the number of buses of each type should be used for the trip for the least possible cost.  

(10 marks)

**QUESTION THREE (20 MARKS)**

- a) Outline some of the security applications a transport manager can use to secure their trucks using technology. (4 marks)
- b) Urban Mobility is the movement from one point in a city to another to satisfy needs. Explain the three broad categories of urban mobility. (6 marks)
- c) A company has a choice of buying two trucks. Truck X costs \$14,000 and truck Y costs \$15,000. Truck X costs \$2,000 per year to run. With Truck Y there is a 40% chance that it will have running costs of 1,600 pe year and 60% chance that it will have running costs of 2,100. Using a decision tree, calculate the likely cost of the two alternative scenarios and recommend to the company which truck they should choose. (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Clearing and forwarding agents are a link between the owners of the goods and the owners of the means of transport. You have been appointed in the clearing and forwarding agent selection panel of your company. Describe at least five (5) criteria the panel should consider when selecting the agent. (10 marks)
- b) Construct the network for the following project: **Activities:**  
A is the first activity in the project,  
B starts when A is complete,  
C follows B,  
D starts at the same time as B; E follows all other jobs.  
Number the nodes, starting at one.  
Using the following activity timings, add the EST and LFT for each node and determine the critical path for this project.

Activity	A	B	C	D	E
Duration (days)	3	6	4	3	8

(10 marks)

**QUESTION FIVE (20 MARKS)**

- a) Using queuing theory minimizes costs by improving the flow of customers in queues at busy times. Outline four (4) kinds of information required to model a queue. (4 marks)
- b) Your company is interested in venturing in marine logistics. As the head of transport department, explain to the management at least three (3) roles of Kenya Maritime Authority (KMA) in marine transportation. (6 marks)
- c) Explain five (5) contemporary logistics strategies that a supply chain director can formulate for the transport and logistics section (10 marks)

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