TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE 10B)

ECE 2507: LOGISTICS & SYSTEM ANALYSIS IN TRANSPORTATION

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2013
TIME ALLOWED: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*
- *Pocket calculator*

This paper consists of **FIVE** questions.
Answer question **ONE (COMPULSORY)** in section **A** and any other **TWO** questions from section **B**
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

SECTION A

Question One (Compulsory)

a) Briefly describe the **FOUR** main problems faced in vehicle routing and scheduling. **(20 marks)**

b) With the aid of an organizational chart briefly describe 'logistics functional structure' **(10 marks)**

SECTION B (Attempt any TWO questions)

Question Two

a) Using hypothetical examples, explain how the following can affect the income from logistics operations.
- **(i)** Vehicle capacity
- **(ii)** Vehicle utilization **(14 marks)**

b) Differentiate between logistics and supply chain management **(6 marks)**

Question Three

a) Describe the typical roles played by a logistics manager. **(6 ½ marks)**

b) Explain **THREE** main logistics area of responsibility. **(4 ½ marks)**

c) Briefly describe the following lifting equipment:
- **(i)** Reach stack
- **(ii)** Gripper lift **(9 marks)**

Question Four

a) Explain the steps that are followed by a logistics company when hiring temporary staff from an employment agent. **(5 marks)**

b) State **FIVE** elements of logistics and distribution and outline the important factors that are considered for each element **(10 marks)**

c) In the context of transportation briefly describe 'logistics' **(5 marks)**

Question Five

a) In respect to the East Africa countries state **THREE** policy measures that affect logistics for cross-border transporters. **(4 marks)**

b) Briefly describe the following equipment used in logistic operations:
- **(i)** Swap body
- **(ii)** Road reiler trailers **(12 marks)**

c) Briefly describe the "total logistics concept" **(4 marks)**