TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING
[Institutional Based Programmes]

ECE 2507: LOGISTICS & SYSTEM ANALYSIS TRANSPORTATION

END OF SEMESTER EXAMIANTION
SERIES: APRIL 2013
TIME: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
  - *Answer Booklet*
  - *Pocket Calculator*

This paper consists of **FIVE** questions. Answer question **ONE** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

a) Briefly explain the **THREE** main logistics areas of responsibility. **(7 marks)**

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

c) In respect to the East African countries, state **THREE** policy measures that affect logistics for cross-border operations such as trucks transporting goods to neighbouring countries. **(4 marks)**

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d) Using hypothetical examples, explain how the following can affect the income from logistics operations.

    (i)   Vehicle capacity
    (ii)   Vehicle utilization   **(14 marks)**

Question Two

a) Briefly describe the following types of lifting equipment.
    (i)   Reach stack
    (ii)   Gripper lift   **(8 marks)**

b) (i) Briefly explain 'logistics' as used in transport operations.   **(6 marks)**

    (ii) Describe the role played by a logistics manager in a transport firm.   **(6 marks)**

Question Three

a) Briefly explain the difference between logistics and supply chain management.   **(6 marks)**

b) Briefly describe the following equipment used in the transportation of goods:
    (i)   Swap body
    (ii)   Road reilers   **(10 marks)**

c) In reference to transportation briefly explain the 'total logistics concept'   **(4 marks)**

Question Four

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

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

Question Five

Name and briefly describe the **FOUR** problems encountered in vehicle routing and scheduling.
    (20 marks)