

TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

BACHELOR OF SCIENCE IN ENGINEERING

SERIES.....

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:-

- Pocket calculator
- Answer booklets

This paper consists of FIVE questions in two sections A and B.

Answer question 1 (Compulsory) and any other two question in section B

Maximum marks of each part of a question are as shown

This paper consists of Printed pages

SECTION A

Q1 (COMPULSORY)

Name and explain the FOUR main problem that are encountered in scheduling and vehicle routing. **(20marks)**

SECTION B: Answer any two question

Q 2 (a) There are FIVE elements of logistics and distribution. Name and explain them **(10 marks)**

(b) Describe in details the following equipment:-

(i) Swap body

(ii) Road reiler trailers **(10 marks)**

Q 3 Explain in details the total logistics concept as used in transportation of goods. **(20 marks)**

Q 4(a) Using hypothetical examples show how the following affect logistics operations:-

(i) Vehicle capacity

(ii) Vehicle utilization

(iii) Age of the vehicle **(20 marks)**

Q 5 (a) In relation to logistics operation explain the steps followed in the design of warehouses. **(10marks)**

(b) Name and briefly explain the FIVE challenges encountered in logistics operations **(10marks)**