



TECHNICAL UNIVERSITY OF MOMBASA
Faculty of Business & Social Studies

DEPARTMENT OF BUSINESS STUDIES

UNIVERSITY EXAMINATIONS FOR
MASTERS OF BUSINESS ADMINISTRATION

BMS 5201: INTRODUCTION TO MANAGEMENT SCIENCE

END OF SEMESTER EXAMINATIONS

SERIES: AUGUST 2013

TIME: 3 HOURS

INSTRUCTIONS:

- Answer Question **ONE (Compulsory)** and any other **THREE** questions.
This paper consists of Two printed pages
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QUESTION 1 (Compulsory)

- a) Outline the six phase approach of model Building. (6marks)
- b) Explain five characteristics of during process. (5marks)
- c) Describe the steps involved in a simulation study. (6marks)
- d) Write short notes on the following
 - i) Buffer stock
 - ii) Replenishment point
 - iii) Carrying cost
 - iv) Set-up cost. (3marks)

QUESTION 2

- a) Use the dual simple method to solve the following problem.
Maximize $-2x_1 - 3x_2$
 $x_1 + x_2 \geq 2$
 $2x_1 + x_2 \leq 10$
 $x_1 + x_2 \leq 8$
 $x_1, x_2 \geq 0$ (10marks)
- b) Outline the steps for solving an LP using the double phase simplex method. (15marks)