



# TECHNICAL UNIVERSITY OF MOMBASA

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SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT SCIENCE

## UNIVERSITY EXAMINATION FOR:

BACHELOR OF COMMERCE (PROCUREMENT OPTION)

BPC 4403: MATERIALS PLANNING, PRODUCTION AND CONTROL

END OF SEMESTER EXAMINATION

SPECIAL/SUPPLEMENTARY EXAMINATIONS

**SERIES:** DECEMBER 2016

**TIME:** 2 HOURS

**DATE:** DECEMBER 2016

### Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of FIVE questions. Attempt Question ONE and any other TWO Questions

**Do not write on the question paper.**

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### **Question ONE**

a) The following information was extracted from the books of Mali Holdings regarding its stocks:

i.	Reorder quantity	1800
ii.	Reorder period	4 weeks
iii.	Maximum consumption	450 units/week
iv.	Normal consumption	600 units/week
v.	Minimum consumption	150 units/week
Vi	Maximum reorder period	5 weeks
Vii	Minimum reorder period	3 weeks

## **Required**

Determine the following stock levels for Mali Holdings:

- i. Re-order level (5 marks)
  - ii. Maximum stock level (5 marks)
  - iii. Minimum stock level (5 marks)
- b) With examples, discuss the concept of Materials Requirement Planning (5 marks)
- c) Materials handling is one of the major and most costly operations in an organization. Explain the importance of efficient material handling (10 marks)

## **Question TWO**

- a) Advise the management of your organization how they can use the factor rating system in determining the location of their new production facility (12 marks)
- b) Facility or plant location is the determination of the positioning, situation or choice of site for productive or operative facilities. With examples, explain the need for facility location planning (8 marks)

## **Question THREE**

- a) Distinguish between Value analysis and value engineering and discuss the steps followed in Value Analysis/Value Engineering (VA/VE) approach (10 marks)
- b) Explain the factors that influence the choice of a production facility location (10 marks)

## **Question FOUR**

- a) Lean manufacturing has a few basic rules that need to be followed in case an organization wishes to implement lean. Following these rules helps an organization to implement lean manufacturing without any difficulty and in less time. Clearly explain the basic lean manufacturing rules in an organization (10 marks)
- b) Clearly explain some of the best practices in warehousing (10 marks)

### **Question FIVE**

- a) Explain how the 5s-workplace organization is used as a primary tool in lean manufacturing (10 marks)
  
- b) Manufacturing relies upon process technology, which refers to the equipment, people and systems used to produce a firm products and service. With examples explain any five process technologies (10 marks)