



TECHNICAL UNIVERSITY OF MOMBASA

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

ORDINARY 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.

Question ONE

a) Kazi Nyingi Ltd purchases a raw material from an outside supplier at cost of Shs 140 per unit.

The total annual demand for the product is 18,000 units and the holding cost is Shs 80 per unit per year while the ordering cost is Shs 100 per order. A quantity discount of 6% of the purchase price is available for orders in excess of 1,000 units.

Required:

i. Calculate the EOQ and the associated costs. (10 marks)

ii. Calculate the total costs if the company purchased in batches of 1,000 units. (5 marks)

iii. Advise the management on the appropriate inventory policy. (5 marks)

b) What is aggregate production planning? With examples, explain the strategies that manufacturing organizations use in aggregate production planning (10 marks)

Question TWO

- a) Advise the management of your organization on the various parameters that they can use so as to measure the performance of their warehouses (8 marks)
- b) Material handling constitutes a very large percentage of the firm's total logistical costs. Explain the guidelines to be followed in designing an effective material handling system and discuss the factors to be considered when choosing a machine for material handling (12 marks)

Question THREE

- a) Distinguish between MRP and MRP II and clearly explain the main inputs that characterize MRP systems (10 marks)
- b) The foundation of lean philosophy has been to eliminate all muda from the supply chain. Clearly state and explain any five types of muda that have been identified to detrimental to supply chain performance (10 marks)

Question FOUR

- a) What is variety reduction as used in materials management? Explicitly discuss the procedure for variety reduction (12 marks)
- b) An already existing organization with one or more facilities existing may be considered when it is due for expansion or relocation. Explain when expansions of facilities may necessitate consideration for location decisions (8 marks)

Question FIVE

- a) With examples, explain how the Hoshin planning method is used to achieve greater results at a faster rate when implementing lean manufacturing (10 marks)
- b) Discuss the use of standard costing and replacement costing in measuring and valuation of inventory (10 marks)