THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
A. M. E. C. E. A

GABA CAMPUS - ELDORET

MAIN EXAMINATION

JANUARY – APRIL 2023 TRIMESTER

SCHOOL OF BUSINESS

ORDINARY DIPLOMA IN BUSINESS MANAGEMENT

DEPARTMENT OF ACCOUNTING AND FINANCE

CID 083: QUANTITATIVE TECHNIQUES

Date: April 2023	Duration: 2 Hours

Instructions: Answer Question ONE and any other TWO questions

Q1.

a) A company producing animal feeds must produce at least 200 kgs of a mixture consisting of ingredient X_1 and X_2 daily. X_1 costs shs. 3 per kg and x_2 costs shs 8 per kg. No more than 80 kgs of X_1 can be used and at least 60 kgs of X_2 must be used. You are required to formulate a mathematical model to this problem.

(10 Marks)

b) Describe the main steps in the decision making process **(10 Marks)**

c) Discuss the role of Operations research in decision making **(10 Marks)**

Q2.

a) Discuss the main elements of the queuing system **(10 Marks)**

b) Discuss role of quantitative techniques in business decision making

(10 Marks)

Q3.

a) Discuss the advantages of a model in operations research **(10 Marks)**

b) Describe the various decision making environments **(10 Marks)**

ISO 9001:2015 Certified by the Kenyan Burea of Standards

Q4.

a) Consider the following activities required to complete the processing of a customer's order and draw the network **(10 Marks)**

Activity	Preceding activity
A	-
B	-
C	A
D	-
E	B
F	C

b) What are the various costs associated with sudden failure items

(10 Marks)

END