TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DICT Y2S2

EIT 2205: OBJECT ORIENTED ANALYSIS AND DESIGN

END OF SEMESTER EXAMINATION1

SERIES:AUGUST2019

TIME:2HOURS

DATE: Pick DateApr2019

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attemptany THREE questions.
Do not write on the question paper.

QUESTION ONE [20 Marks]

a. Define the term" Object-oriented analysis".   [2 marks]
b. Outline four primary tasks in object-oriented analysis (OOA).   [4 marks]
c. State four important features of object–oriented programming.   [4 marks]

d. Describe three characteristics of an object.   [6 marks]

e. Outline two characteristics of a class.   [4 marks]

QUESTION 2

a. Define the term Object Oriented Design.   [4 marks]

b. Distinguish between encapsulation and data hiding.   [4 marks]

c. Distinguish between polymorphism and inheritance. Give examples.   [6 marks].

d. Outline three types of Cardinality Ratios of Associations.   [6 marks]

QUESTION 3

a. Define the term object model. [2 marks]

b. State four characteristics of object modeling. [6 marks]

c. Outline four components of a use case diagram. [4 marks]

d. An automated Trading House System has transactions with two types of customers, individual customers and corporate customers. Once the customer places an order, the sales department processes it and the customer is given the bill.The system allows the manager to manage customer accounts and answer any queries posted by the customer. Draw a use case diagram for the system. [8 marks]

QUESTION 4

a. Define the term "dynamic model" of a system. [2 marks]

b. Outline four concepts of dynamic modeling. [6 marks]

c. Outline four parts of a state diagram. [6 marks].

d. Draw a state transition diagram for a journey from Mombasa to Nairobi. [6 marks]

Commented [k1]:

QUESTION 5

a. Define the term "data flow diagram". [2 marks]

b. State three advantages and one disadvantage of data flow diagrams. [4 marks]

c. Identify four types of relationships in UML diagrams. [4 marks]

d. A bank has many branches. In each zone, one branch is designated as the zonal head office that supervises the other branches in that zone. Each branch can have multiple accounts and loans. An account may be either a savings account or a current account. A customer may open both a savings account and a current account. However, a customer must not have more than one savings account or current account. A customer may also procure loans from the bank. Draw a class diagram for this bank. [10 marks]