TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DICT Y2S2

EIT 2201: OBJECT ORIENTED ANALYSIS AND DESIGN

END OF SEMESTER EXAMINATION 2

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 Design (OOD)   [4 marks]
c. Define the term decomposition in design and state its three advantages.   [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. List five components of a data flow diagram.   [5 marks]

c. Identify five key components of object design.   [5 marks]

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

QUESTION 3

a. Define the term use case diagram. [2 marks]

b. Outline four components of a use case diagram. [6 marks]

c. A student must first register before login into a university course management system. After login in, the student can view his semester results, download timetable and notes and also register for course units as well as check for fee balance.

d. Draw a use case diagram for the system. [6 marks]

e. Draw a data flow diagram for the system. [6 marks]

QUESTION 4

a. Define the term "functional model" of a system. [2 marks]
b. Outline four concepts of functional 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 following terms
   i.   Component diagram
   ii.   Activity diagram
   iii. Sequence diagram
   iv.   Collaboration diagram. [8 marks].

b. Consider a Wholesaler Software System that automates the transactions of a wholesale shop. The shop sells in bulks and has a clientele comprising of merchants and retail shop owners. Each customer is asked to register with his/her particulars and is given a unique customer code. Once a sale is done, the shop registers its details and sends the goods for dispatch.
   i.   Draw a data flow diagram for the system. [6 marks]
   ii.   Draw a class diagram for the system. [6 marks]