TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION

DIPLOMA IN INFORMATIOM COMMUNICATION TECHNOLOGY

EIS 2201 DATA BASE MANAGENT:

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 2 HOURS

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 any THREE questions.

Do not write on the question paper.

Question 1 (20 Marks)

a.   Describe any two methods DBMS can use to maintain data security   **[4 Marks]**
b.   Describe any four properties of traditional data files system   **[8 Marks]**
c.   Explain the role of the following:

       i.   Database Administrator
      ii.   Database Designer   **[8 Marks]**

Question 2 (20 Marks)

a.   Tabulate any 4 differences between data and information   **[8 Marks]**
b.   Explain how data is related in Relational Data Model   **[6 Marks]**
c.   Explain the following relational database terms:

       i.   Tuple
      ii.   Attribute

iii. Relation
iv. Candidate Key
v. Cardinality
vi. Primary Key

[6 Marks]

Question 3 (20 Marks)

a.   List and describe any four constraints used by relational database model   **[12 Marks]**
b.   There are three DBMS schemas.

    i.   List the three schemas   **[3 Marks]**
    ii. State how the schemas are stored   **[1 Mark]**
    iii. State functions of any two schemas   **[4 Marks]**

Question 4 (20 Marks)

a.   Describe any 5 advantages of database technology   **[10 Marks]**
b.   State the three tiers of multi tier database. Describe the function of each tier   **[9 Marks]**
c.   Sketch a diagram to show the relationship between the three tiers   **[1 Marks]**

Question 5 (20 Marks)

a.   Define the term aggregate function as applied to SQL and state any **3** SQL
    aggregate functions   **[4 Marks]**
b.   Describe any 5 SQL clauses   **[10 Marks]**
c.   Briefly describe advantages of distributed database   **[6 Marks]**