



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION
TECHNOLOGY
UNIVERSITY EXAMINATION
DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
DATABASE MANAGEMENT: EIS 2201
END OF SEMESTER EXAMINATION
SERIES: April 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. Explain the following:
- I. Logical Data Independence
 - II. Tuple
 - III. Candidate Key
- [6 Marks]**
- b. Describe any five characteristics of traditional filing system (flat file) **[10 Marks]**
- c. Explain any two advantages of database views **[4 Marks]**

Question 2 (20 Marks)

- a. Explain any five characteristics of database technology **[10 Marks]**
- b. State any five functions of Database Management System (DBMS) **[5 Marks]**
- c. List components of Database System **[5 Marks]**

Question 3 (20 Marks)

- a. Describe the classification of data [6 Marks]
- b. Explain the term 'Schema' as related to Database Management System [2 Marks]
- c. Explain the components of SQL [6 Marks]
- d. Briefly describe the factors to consider when selecting Database Management System (DBMS) [6 Marks]

Question 4 (20 Marks)

- a. List phases of database design [7 Marks]
- b. Explain the processes used to up data distributed database [4 Marks]
- c. List two ways in which client/server database can be implemented [1 Mark]
- d. Discuss advantages and disadvantages of client/server databases [8 Marks]

Question 5 (20 Marks)

- a. Sketch the 3 layered architecture of DBMS and describe the role of each layer [10 Marks]
- b. Describe any three SQL clauses [6 Marks]
- c. List any four SQL aggregate functions [4 Marks]