

**GARISSA UNIVERSITY**

**SCHOOL OF PURE AND APPLIED SCIENCES**

**END OF SEMESTER EXAMINAION FOR CERTIFICATE OF INFORMATION TEHNOLOGY**

 **UNIT CODE: CIT 009 TITLE: DATABASE SYSTEM**

**DATE: TIME: 2 HOURS**

**INSTRUCTION TO CANDIDATES**

1. The paper consists of two sections A and B.
2. Answer ALL the questions in section A (compulsory).
3. Answer any two Questions from section B.
4. Marks allocated are shown at the end of each question.
5. Write your answers in the answer sheet booklet provided.
6. Show all your workings

**SECTION A :( 30 marks)**

**QUESTION ONE**

1. Define the following terms.
2. Data (1 mark)
3. Database  **(1 mark)**
4. Database management system (**1 mark)**
5. **Relational Database** (**1 mark)**
6. **Non-Relational database** (**1 mark)**
7. Explain four major uses of Database Management system (4 marks)
8. What is the difference between a user and a schema (2 marks)
9. State Four examples of relational database management system (4 marks)
10. State and explain five characteristics of modern DBMS (10 marks)
11. List five types of Attributes used in Entity Relationship Model. (4 marks)

**SECTION B: ( 40 marks)**

**QUESTION TWO**

1. Explain the difference between an Entity and an Attribute in ER diagram presentation ( 4 marks)
2. Explain TWO differences between SQL and NO SQL database ( 4 marks)
3. Explain THREE types of Relationship in ER diagram presentation ( 6 marks)
4. Explain THREE advantages of using DBMS in an organization ( 6 marks)

**QUESTION THREE**

1. List and briefly describe FIVE advantages of using electronic database approach in data storage as compared to the file-based approach ( 10marks
2. Describe the function of the following tools found in a database management system
3. Data Definition Languages (DDL) (3 marks)
4. Data Manipulations Language (DML) (3 marks)
5. Data Dictionary (DD) (4 marks)

**QUESTION FOUR**

1. Outline the Functions of a DBMS? (7 marks)
2. State Factors to consider when choosing a DBMS. (5 marks)
3. State TWO advantages and TWO disadvantages of using DBMS in an organization ( 4 marks)
4. Explain the importance of DBMS for storage of files in an organization ( 4 marks)

**QUESTION FIVE**

1. A table called Employee has the following fields: Employee ID, First Name, Second Name, Date of Birth, Gender, Marital Status, Religion and Salary. Write SQL statements to do each of the following.
2. Retrieve all records [include all fields] from the table. (2marks)
3. Retrieve the Employee ID, First Name, Second Name, Date of Birth, Gender and Marital Status.(3 marks)
4. Write SQL commands to create a database name Garissa\_university and a table called student\_table then insert the following data; (15mks)

