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# KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY UNIVERSITY EXAMINATIONS, 2020/202 ACADEMIC YEAR END OF SEMESTER EXAMINATIONS FOR THE CERTIFICATE INFORMATION COMMUNICATION TECHNOLOGY

### CIT 1007 INTRODUCTION TO DATABASES

Date: DECEMBER, 2020

Time: 2 Hrs.

#### **INSTRUCTIONS TO CANDIDATES**

# ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS QUESTION ONE COMPULSORY (30 MARKS)

a) Discuss the relevance of a database in application development. (4 Marks)

b) Tabulate the differences of a database and a spreadsheet (4 Marks)

c) Outline six major responsibilities of a database administrator. (6 Marks)

d) Discuss any four challenges that organizations encounter when implementing database systems. (6 marks)

- e) Write SQL code that would create a table named Student to store the following details:

  Name, Registration number, Date of Birth and Course. (6 Marks)
- f) Write SQL code to insert the data of two students in the table you have created above.

(4 Marks)

#### **QUESTION TWO (20 MARKS)**

a) Describe the Relational Database Management System. (4 Marks)

b) Discuss the three major categories of datatypes used in MySQL. (6 Marks)

c) Discuss any five features of the MySQL database. (10 Marks)

# **QUESTION THREE (20 MARKS)**

- a) Write SQL syntax that will create a table called PATIENTS with the following columns; patient\_id, patientFName, patientLName and registrationDate (10 Marks)
- b) Write SQL syntax to insert five records in the table you have created above. (10 Marks)

# **QUESTION FOUR (20 MARKS)**

- a) Describe two applications of a database. (4 Marks)
- b) Distinguish between Primary Key and Foreign Key. (4 Marks)
- c) Describe the WHERE clause with the help of relevant SQL syntax (6 Marks)
- d) Using the syntax above describe the use of the LIKE clause when used along with the WHERE clause. (6 Marks)
- e) Show the use of the UPDATE query with the help of SQL syntax (6 Marks)

#### **QUESTION FIVE (20 MARKS)**

- a) Describe referential integrity and its application in a database. (4 Marks)
- b) Write SQL code to store the data of a Customer in a MovieStore. (8 Marks)
- c) Describe how you would ensure the results obtained are sorted in ascending order when you query the database. Use an example with relevant SQL commands. (8 Marks)