

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2016/2017**

**YEAR 2 SEMESTER 2 EXAMINATIONS FOR THE DIPLOMA IN INFORMATION TECHNOLOGY**

**DIT 0504: DATABASE PROGRAMMING**

**DATE: JULY 2017 TIME: 1.5 HOURS**

INSTRUCTIONS: ATTEMPT QUESTION ONE AND ANY OTHER TWO

QUESTION ONE

JKUAT-Kakamega campus wishes to implement MS SQL server as their Relational Database Management System (RDBMS). The application will be used to store names of students, their marks, and records of lecturers among other functions. The administrator will have rights and privileges to manipulate the database. He will be able to insert new records and even delete others. Users will be given rights which will enable them to only view the records in the tables in the database.

i) Apart form SQL server, name any other four relational database systems (2 marks)

ii) Give the syntax of SQL command that will be used by the administrator to create a database (4 marks)

iii) Using a diagram, describe the SQL process (6 marks)

iv) Explain four features of SQL server that have made the administration of JKUAT to consider using it in their enterprise (8 marks)

QUESTION TWO

i) What is the syntax of create table command (3 marks)

ii) List down three capabilities of structured query language (SQL) (3 marks)

iii) Define the four categories of data integrity that exist in Microsoft SQL server (8 marks)

iv) SQL commands have been grouped into three major categories. State these categories and give two commands in each category and explain the function each performs in a database (6 marks)

QUESTION THREE

i) What is the difference between GRANT and REVOKE commands as used in the SQL server (2 marks)

iia) What is an SQL constraint (2 marks)

b) Explain any three SQL constraints (6 marks)

iii) With SQL, how do you select all records from a table named students with the following fields: First Name, Last Name, ID NO., Course

(4 marks)

iv) Explain the four types of operators, giving examples in each case

(8 marks)

QUESTION FOUR

i) What are stored procedures (3 marks)

ii) Define views and discuss how they are of help to users (4 marks)

iii) List four advantages of stored procedures (4 marks)

iv) Give six properties of relational tables (6 marks)

va) What is a primary key (1 mark)

b) State two importance of a primary key (2 marks)