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MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE

COURSE CODE: BIT 316

COURSE TITLE: DATABASE ADMINISTRATION

DATE: 15/12/2022   **TIME:** 08:00-10:00PM

INSTRUCTIONS TO CANDIDATES

Question ONE (1) is compulsory
Attempt any TWO (2) questions

QUESTION ONE (30 MARKS)

a. Define data integration   (2 Mark)

b. Define the following terms

    I.   Data   *(1 Mark)*

    II. Record   *(2 mark)*

    III. Field   *(2 Marks)*

c. Describe a Database   (3 Marks)

d. As a database administrator in your institution describe database design   (4 Marks)

e. Differentiate between local and global transactions   (2 Marks)

f. State Some of the properties of traditional mainframe database system architecture   (8 Marks)

j. Elaborate to the term Deadlock in computer architecture   (6 Marks)

QUESTION TWO (20 MARKS)

a. Highlight **ONE** challenge of data architecture   (1 Mark)

b. The major part of the installation planning process is determining the SQL Server 2005 edition you need to use. SQL Server 2005 offers **FIVE** editions state these server editions   (5 Marks)

c. Describe any **FOUR** SQL server editions editions.   (8 Marks)

d. Explain your understanding of a SQL Server database replication and its importance   (6 Marks)

QUESTION THREE (20 MARKS)

e. Define schema matching as applied in data integration   (1 Mark)

f. State **THREE** types of accounts that you can choose from for the SQL Server and SQL Server Agent services: (3 Marks)

g. Describe the **THREE** types of accounts as stated above   (6 Marks)

h. Authentication mode and logins are the first security level for SQL Server, to achieve this it is important to Choose Authentication Modes, describe the **TWO** modes in SQL Server 2005 used in authenticating access to database resources.   (6 Marks)

i. As a Database administrator, explain the process and the conditions for one to Delete a table in a database?   (4 Marks)

QUESTION FOUR (20 MARKS)

a. In an organization with many database users, the process of Managing Database roles involves the process of creation, modification, removal of users and ensuring that they have correct permissions . Explain any **FIVE** fixed database roles matched with each database level permissions. (10 Marks)

b. You have been asked to explain to interns in your organization the seven permissions that can be assign for a table, list any **FIVE** table permissions and explain the purpose for each table permissions (10 Marks)

QUESTION 5 (20 MARKS)

a. What is the purpose of a check constraint as applied in a table? (2 Marks)

b. SQL Server 2005 specifies FIVE different *isolation levels* that affect the way transactions are handled and the duration of locks. Describe the SQL Server 2005 Isolation Levels (10 Marks)

c. Log shipping synchronizes distributed databases that can reside on different servers or on the same server but within different instances. Explain the **FOUR** recommended log shipping configuration components (8 Marks)