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QUALIFICATION : **BACHELOR OF SCIENCE IN HEATLH INFORMATION SYSTEMS MANAGEMENT**	
QUALIFICATION CODE: **07BSHM**	LEVEL: **6**
COURSE: **HEALTH DATABASE MANAGEMENT**	COURSE CODE: **HDM621S**
DATE: **NOVEMBER 2024**	SESSION: **1**
DURATION: **3 HOURS**	MARKS: **100**

FIRST OPPORTUNITY EXAMINATION: QUESTION PAPER

EXAMINER: **MS. SINTE MUTELO**

MODERATOR: **MS. SHILUMBE CHIVUNO-KURIA**

INSTRUCTIONS:

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam answer booklet . This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.
6. Answer each question/section on a new page.

PERMISSIBLE MATERIALS

1. Ruler
2. Eraser
3. Pencil
4. Pen

ATTACHMENTS

1. None

This Question paper consists of 6 pages including this front page.

SECTION A: MULTIPLE CHOICE AND TRUE / FALSE [20 MARKS]

1. QUESTION 1: MULTIPLE CHOICE QUESTIONS [10 MARKS]

Choose the correct answer from the multiple-choice options.

1.1 Which statement best describes a health database?

a. A collection of health data that can be used for multiple purposes in healthcare. [1]
b. Collection of processed data.
c. Raw Facts about a patient
d. A software to manage data

1.2 What is the primary goal of introducing database management systems to healthcare? [1]

a. organizing, maintaining, and retrieving health information
b. managing appointments of HISM staff
c. Scheduling patient's appointment
d. Controlling data

1.3 ..... consists of two or more files located in different sites. [1]

a. Database management systems
b. Distributed Database
c. Management system
d. Database

1.4 Which programming language is used for storing and processing information in a relational database? [1]

a. Data definition language (DDL)
b. Data manipulation language (DML)
c. Structured query language (SQL)
d. Data control Languages (DCL)

1.5 The ..... statement is used to modify the existing records in a table? [1]

a. Delete
b. Update
c. Null
d. Order By

1.6 ..... is a standard language for storing, manipulating and retrieving data in databases? [1]

a. DML
b. SQL
c. DDL
d. DCL

1.7 Which SQL statement will delete the table completely? [1]

a. DELETE FROM table_name;
b. DROP TABLE Customers;
c. DELETE FROM Customers WHERE Customer Name='Peter Michel';
d. DELETE FROM Customers;

1.8 What is the primary role of the Data Warehouse in healthcare? [1]

a. Storing historical decision support information
b. Retrieving data from tables
c. Managing financial data
d. Analyzing laboratory test results

1.9 Types of integrity constraints include these except for: [1]

a. Primary key
b. Foreign key
c. Not null
d. Numeric

1.10 In a ..... database, the data model lays the foundation for the database and identifies important entities, their attributes, and the relationships among entities. [1]

a. Multimodel
b. Relational
c. Cloud
d. Self-driving

QUESTION 2: TRUE/FALSE QUESTIONS **[10 MARKS]**

2. Evaluate the statements and select whether the statement is true or false. Write the word 'True' or 'False' next to the corresponding number on your ANSWER SHEET. [10]

2.1 A major purpose of a database system is to provide users with an abstract view of the data. [1]

2.2 Data dictionary contains metadata (i.e., data about data). [1]

2.3 Declarative DMLs are also referred to as procedural DMLs. [1]

2.4 DML fails to query information from the database and insert tuples into, delete tuples from, and modify tuples in the database. [1]

2.5 The most critical resource in healthcare is patient data. [1]

2.6 The select clause lists the attributes desired in the result of a query. [1]

2.7 Dropping of attributes is supported by many databases. [1]

2.8 Data Warehouse can be applied anywhere we have a huge amount of data. [1]

2.9 An SQL relation is defined using the create table command. [1]

2.10 The table_name represents the name of the table from which you want to select data. [1]

SECTION B: SHORT/LONG ANSWER QUESTIONS [50 MARKS]

(50)

QUESTION 3

3. Please answer all the questions in this section.

3.1 Define what is a database Management system. [2]

3.2 Describe any five (5)examples of Database applications. [10]

3.3 What is the role of data validation when entering data in a database [5]

3.4 Discuss the benefits of Data Warehouse in healthcare [8]

3.5 What are some of the activities that the Relational databases perform? [3]

3.6 Clarify the purpose of implementing database systems. [5]

3.7 Differentiate the Logical view from the physical view of a database [4]

3.8 You just graduated from NUST and were appointed as a Database Administrator.

A person with central control over the system is called a database administrator (DBA). Summarise the functions of a DBA? 8]

3.9 Discuss the importance of Data security in healthcare. [5]

SECTION C: PRACTICAL QUESTIONS [30 MARKS]

QUESTION 4
Answer all questions in this section.

4.1 Use a Diagram to present the database development life cycle [6]

4.2 Use Chen's Notation to show the relationship between the entity student and course. [3]

4.3 You are appointed to a database manager position at the Health Information Department in the Ministry of Health. Your first task is to help your data collectors create a Patient table in your database with 3 records and five fields. Use a free-hand diagram to present what you are explaining highlighting the physical view of records and fields. [10]

4.4 Clarify the use of the following SQL statements: [5]

a. SQL SELECT
b. SQL SELECT DISNTICT
c. SQLWHERE Clause
d. SQLORDER BY
e. SQL UPDATE Statement

4.5 Database applications are usually partitioned into two or three parts. Use a diagram to show the difference Two-tier architecture is from Three-tier architecture. [6]

END OF QUESTION PAPER