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QUALIFICATION : **BACHELOR OF SCIENCE IN HEATLH INFORMATION SYSTEMS MANAGEMENT**	
QUALIFICATION CODE: **07BHIS**	LEVEL: **6**
COURSE: **ELECTRONIC HEALTH RECORDS**	COURSE CODE: **EHR621S**
DATE: **JANUARY 2025**	SESSION: **2**
DURATION: **3 HOURS**	MARKS: **100**

SECOND OPPORTUNITY / SUPPLEMENTARY: 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 examination 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.

PERMISSIBLE MATERIALS

1. Pencil, ruler and eraser

ATTACHMENTS

1. none

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

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

QUESTION 1 **[10 MARKS]**

1. Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER booklet. [10]

1.1 The ..... key of a relation may be the primary key of another relation [1]

a. Primary
b. Super
c. Composite
d. Foreign

1.2 An UPDATE query: [1]

a. is used to add new records to a table.
b. is used to change existing values within a table.
c. is used to change the structure of the database.
d. is used to determine what has changed in the database since the last benchmark process.

1.3 The..... clause is used to filter records. [1]

a. ORDER BY
b. AND
c. WHERE
d. NOT operator

1.4 This is the process of selecting the appropriate database management system to create a working database. [1]

a. Design
b. Implementation
c. Maintenance
d. Testing

1.5 An object distinguishable from other objects is called..... [1]

a. Domain
b. Entity
c. Attribute
d. Identifier

1.6 ..... is one piece of data or information about a person or thing. [1]

a. Row

b. Field
c. Data
d. Information

1.7 ..... store the database itself. [1]

a. Data dictionary
b. Indices
c. Data files
d. File manager

1.8 A ..... is a separator or restrictor of network traffic, which can be configured to enforce your organization's data security policy. [1]

a. Firewall
b. Operating system
c. Access control
d. Authentication

1.9 You would use this SQL command to remove a table and all its contents from the database schema? [1]

a. DROP TABLE
b. GROUP BY
c. INDEX BY
d. SEQUENCE BY

1.10 A database ..... is a collection of tools for describing data, data relationships, data semantic and consistency constraints. [1]

a. Mining
b. Model
c. Architecture
d. Hierarchical

QUESTION 2: TRUE/FALSE **[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 booklet. [10]

2.1 SQL DROP is used to remove objects from the database. [1]

2.2 The advantages of the two-tier architecture are its simplicity and seamless compatibility with existing systems. [1]

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

2.4 MySQL is ideal for both small and large applications. [1]

2.5 A transaction is a collection of operations that performs a single logical function in a database application. [1]

2.6 An UPDATE ... SET ... statement can modify multiple rows based on multiple conditions on a table. [1]

2.7 An entity is a property or characteristic of an attribute type that is of interest to the organization. [1]

2.8 A primary key must change in value. [1]

2.9 The WHERE clause is used to filter records. [1]

2.10 Physical security strictly limits access to the physical server and hardware components. [1]

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

QUESTION 3 **(50)**

Please answer ALL of the questions in this section.

3.1 Using examples, differentiate the following terms:

3.1.1 Primary key and foreign key [3]

3.1.2 Drop and Delete [3]

3.2 Distinguish Strong entities from weak entities [4]

3.3 List five (5) examples of Database applications. [5]

3.4 List and describe the advantages and disadvantages of the three-tier database architecture. [5]

3.5 Data models can be classified into the categories name them: [3]

3.6 Differentiate between a Personal database from Organisational Databases [12]

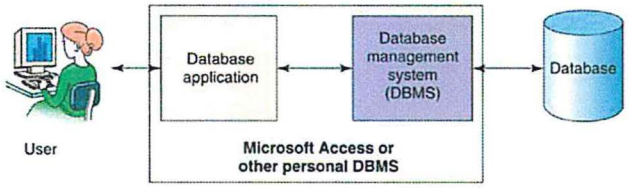
3.7 Construct the table below and complete it while listing three entity types and their attributes. [6]

Entity Types	Attributes
a.	
b.	
c.	

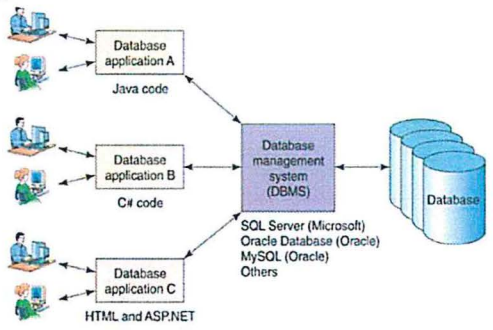
3.8 Give an example of the common data types. [6]

3.9 Recognise the type of database represented in the diagrams below: [4]

a.



b.



c.

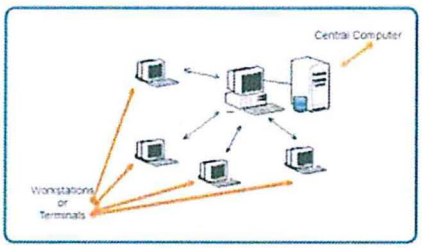
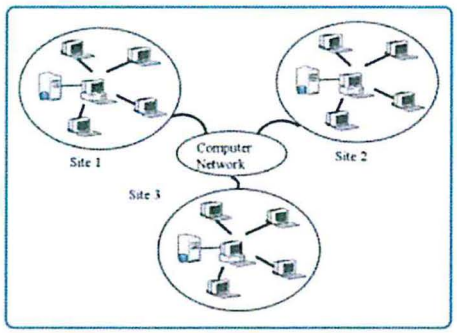


Figure 6.1. Example of a centralized database system.

d.



SECTION C: PRACTICALS [30 MARKS]

QUESTION 4 **(30)**

Please answer ALL of the questions in this section.

4.1 Write an SQL statement to create a new table named with attributes for Patient_ID, First_Name, Last_Name, Birthday, and Contact_Number. Decide on your own about reasonable column names and data types and include a primary Key. [15]

4.2 Given the following business rules. Identify all the entities by choosing at least (5) attributes for each entity and include a primary key. [15]

a. A football team has at least 11 players and may have up to 40 players.
b. Each player may or may not play one or more games.
c. A minimum of 11 players and a maximum of 14 players may participate in a game.
d. A player may or may not score one or more goals.
e. Each game may have zero or more goals.

END OF EXAMINATION QUESTION PAPER