

STUDENT ID NO. _____

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UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION SCHOOL OF EDUCATION AND LEADERSHIP COLLEGES OF
EDUCATION

END OF YEAR THREE SEMESTER ONE EXAMINATIONS, 2022/2023

B.ED. PROGRAMME COURSE CODE: TEJS 305

COURSE TITLE: DATABASE SYSTEMS & SOFTWARE

Instruction: Answer all questions in Section A and any three in Section B.
Time: 2 hours

SECTION A [25 Marks] Answer all the questions in this section

1. What is a database?
 - a) Organized collection of information that cannot be accessed, updated, and managed
 - b) Collection of data or information without organizing
 - c) Organized collection of data or information that can be accessed, updated, and managed
 - d) Organized collection of data that cannot be updated
2. Related fields in a data base are grouped to form _____.
 - a) Data file
 - b) Data record
 - c) Menu
 - d) Bank
3. What is DBMS?
 - a) DBMS is a collection of queries
 - b) DBMS is a high-level language
 - c) DBMS is a programming language
 - d) DBMS stores, modifies and retrieves data
4. Which type of data can be stored in the database?
 - a) Image oriented data
 - b) Text, files containing data
 - c) Data in the form of audio or video
 - d) All of the above
5. Column header is referred to as _____

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d) Domain

6. Disadvantages of File systems to store data are _____
 - a) Data redundancy and inconsistency
 - b) Difficulty in accessing data
 - c) Data isolation
 - d) All of the above
7. It is more accurate to define a _____ as a variety of different record types that are treated as a single unit
 - a) Database
 - b) Table
 - c) Record
 - d) Flat File
8. The language used in application programs to request data from the DBMS is referred to as the ____
 - a) DML
 - b) DDL
 - c) Query language
 - d) All of the above
9. Queries to a database _____
 - a) are written in English
 - b) can use aggregate functions like SUM and COUNT
 - c) both a. and b.
 - d) none of the above
10. Which of the following is not an example of DBMS?
 - a) MySQL
 - b) Microsoft Access
 - c) IBM DB2
 - d) Google
11. Which language has recently become the de-facto standard for interfacing application programs with relational database system?
 - a) Oracle
 - b) SQL
 - c) 4GL
 - d) None of the above
12. Which of the following is not a function of the database?
 - a) Managing stored data
 - b) Manipulating data
 - c) Security for stored data
 - d) Analysing code
13. In SQL, which command is used to add new rows to a table?
 - a) ALTER TABLE
 - b) ADD ROW
 - c) INSERT
 - d) APPEND
14. Which of the following is a function of the DBMS?

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- a) Storing data
 - b) Providing multi-users access control
 - c) Data Integrity
 - d) All of the above
15. Which of the following is known as a set of entities of the same type that shares same properties, or attributes? a) Relation set
b) Tuples
c) Entity set
d) Entity Relation model
16. What does an RDBMS consist of?
a) Collection of Records
b) Collection of Keys
c) Collection of Tables
d) Collection of Fields
17. Which of the following is a database administrator's function?
a) Database design
b) Backing up the database
c) Performance monitoring
d) All of the above
18. A _____ contains fields of data about one entity.
a) record
b) file
c) fields
d) document
19. Database management systems are intended to _____
a) eliminate data redundancy
b) establish relationships among records in different files
c) manage file access
d) all of the above
20. Which SQL Query is used to remove a table and all its data from the database?
a) Drop table
b) Delete
c) Purge
d) Remove
21. Which of the following option is used to retrieval of data?
a) Stack
b) Data Structure
c) Linked list
d) Query
22. The Alpha testing is done at _____
a) Developer's end
b) Developer's & User's end
c) User's end
d) None of above

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23. The RDBMS terminology for a row is _____
- a) Attribute
 - b) Degree
 - c) Relation
 - d) Tuple
- 24) The testing is described by which of the following terms?
- a) A stage of all projects
 - b) Evaluating software to find errors
 - c) Finding errors in functions
 - d) all of these
- 25) Data Manipulation Language enables users to _____
- a) retrieval of information stored in database
 - b) insertion of new information into the database
 - c) deletion of information from the database
 - d) all of the above

SECTION B

[75 Marks]

*Answer any **three** questions in this section*

1. (a) Differentiate between data and information, file and record in a database with examples. [10marks]
(b) Explain the following terms. i. entity, ii. attribute, iii. datatype, iv. Database. [20marks]
2. (a) What is Database Management System (DBMS)? [5marks]
b. Explain the following keys in Database Management System. [20marks]
 - i. Primary key
 - ii. Foreign key
 - iii. Super key
 - iv. Composite key
3. a. Explain the term entity in a database management system. [5 marks]
b. Explain four types of Database Management System(DBMS). [20 marks]
4. Explain **five** challenges of Database Management System (DBMS) [25marks]
5. The following tables form part of a database held in a relational DBMS.
Resort (resortNo, resortName, city, country)
Room (roomNo, resortNo, type, cost, bedQty, bedType)
Booking (resortNo, guestNo, dateFrom, dateTo, roomNo)
Guest (guestNo, guestName, guestAddress)
where Resort consists of resort details and ResortNo is the primary key. Room contains room details for each resort and roomNo, resortNo form the primary key. Booking contains details of bookings and resortNo, guestNo, dateFrom forms the primary key. Guest contains guest details and guestNo is the primary key.
 - (i) Identify the foreign keys in this schema. Explain how the entity and referential integrity rules apply to these relations.

Good Luck