MID-TERM EXAMINATION PAPER

FACULTY	**:**	**COMPUTER SCIENCE AND MULTIMEDIA**
COURSE	**:**	**BACHELOR OF INFORMATION TECHNOLOGY (BIT)**
YEAR/ SEMESTER	**:**	**SECOND YEAR / FOURTH SEMESTER**
MODULE TITLE	**:**	**RDBMS**
DATE	**:**	**3RD MARCH 2022**
TIME ALLOWED	**:**	**3 HOURS**
START	**:**	**6:30 AM – 09:30 AM**
SET	**:**	**B**

Instruction to candidates

1. This question paper has THREE (3) Section
2. Answer **ALL** questions in Section A, MCQ.
3. Answer **5** questions in Section B, MSAQ
4. Answer **2** questions in Section C, MEQ
5. No scripts or answer sheets are to be taken out of the Examination Hall.
6. For Section A, answer in the OMR form provided.

Do not open this question paper until instructed.

(Candidates are required to give their answers in their own words as far as practicable)

SECTION A

Multiple Choice Questions **(30*1=30)**

1. Data if arranged relationally and processed, it then becomes
   a. Information
   b. Text
   c. Symbol
   d. Table

2. In Database, data is stored in
   a. Table
   b. Files
   c. Excel
   d. Windows.

3. The following are functions of a DBMS except _____ .
   a. creating and processing forms
   b. creating databases
   c. processing data
   d. administrating databases

4. Helping people keep track of things is the purpose of a _____ .
   a. Database
   b. Table
   c. File
   d. Relationship

5. A Database helps in making data
   a. long
   b. Secure
   c. redundant
   d. both a. and b

6. DBMS should provide following feature(s) _____.
   a. Protect data from system crash
   b. Safety of the information stored
   c. Authorized access
   d. All of these

7. In Relational Database Model, _____ are created.
   a. Relations
   b. Objects
   c. Class
   d. Graph

8. An ERD shows the relationship of
   a. Data
   b. Files
   c. Entities
   d. Attributes

9. Each entity has a set of properties. The properties are called
   a. Tuples
   b. Domain
   c. Class
   d. Attributes

10. A diamond shape in ERD represents
    a. Entity
    b. Attribute

c. Relationship
d. Table

11. One to One relation is represented by
    a.  (Correct)
    b.
    c.
    d.

12. An ER Diagram has a
    a. Cute little Design
    b. Complex Design
    c. High-Level Design
    d. Simple Design

13. An ER Diagram can be used as a
    a. Printing Tool
    b. Painting Tool
    c. Documentation Tool
    d. Writing Tool

14. A person's Name, Birthday and Address are all examples of _____.
    a. Entities
    b. Attributes
    c. Relationships
    d. Table

15. Which is not a component of an E-R model?
    a. Relationships
    b. Entity
    c. Identifiers
    d. Attributes

16. In an Entity-Relationship Diagram "Oval" represents
    a. Attributes
    b. Relationship
    c. Commands
    d. Table

17. An entity in A is associated with one and only entity in B and an entity in B is associated with one and only entity in A. This is called _____ Relation.
    a. One-to-many
    b. One-to-one
    c. Many-to-many
    d. Many-to-one

18. In Relational Model, relationships between tables are created by using
    a. Foreign Keys
    b. Unique Keys
    c. Super Keys
    d. Candidate Keys

19. Which of the following is correct to create a primary key on Id column?
    a. Create table Orders (Id Int Primary key, Name varchar(50))
    b. Create table Orders (Id Int add primary key, Name varchar(50))
    c. Create table Orders (Id Primary key Int, Name varchar(50))
    d. Create table Orders (Id Int and Primary key, Name varchar(50))

20. With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" starts with an "a"?
    a. SELECT * FROM Persons WHERE FirstName='%a%'

b. SELECT * FROM Persons WHERE FirstName='a'
c. SELECT * FROM Persons WHERE FirstName LIKE '%a'
d. SELECT * FROM Persons WHERE FirstName LIKE 'a%'

21. With SQL, how do you select all the records from a table named "Persons" where the "FirstName" is "Peter" and the "LastName" is "Jackson"?
    a. SELECT * FROM Persons WHERE FirstName<>'Peter' AND LastName<>'Jackson'
    b. SELECT FirstName='Peter', LastName='Jackson' FROM Persons
    c. SELECT * FROM Persons WHERE FirstName='Peter' AND LastName='Jackson'
    d. SELECT * FROM Persons WHERE FirstName='Peter' OR LastName='Jackson'

22. How can you change "Olsen" into "Nilsen" in the "LastName" column in the Persons table?
    a. MODIFY Persons SET LastName='Olsen' INTO LastName='Nilsen
    b. UPDATE Persons SET LastName='Olsen' INTO LastName='Nilsen'
    c. MODIFY Persons SET LastName='Nilsen' WHERE LastName='Olsen'
    d. UPDATE Persons SET LastName='Nilsen' WHERE LastName='Olsen'

23. With SQL, How can you delete the records where the "LastName" is "Nilsen" in the Persons Table?
    a. DELETE FROM Persons WHERE LastName='Nilsen'
    b. DELETE ROW LastName='Nilsen' FROM Persons
    c. DELETE LastName='Nilsen' FROM Persons
    d. DROP Table Persons

24. Which SQL keyword is used to sort the result-set?
    a. ORDER
    b. SORT BY
    c. SORT
    d. ORDER BY

25. Which SQL statement is used to insert new data in a database?
    a. INSERT NEW
    b. ADD NEW
    c. INSERT INTO
    d. ADD RECORD

26. Which SQL statement is used to delete data from a table in a database?
    a. DELETE
    b. TRUNCATE
    c. REMOVE
    d. Drop

27. Drop table Persons;
    This statememt :
    a. Deletes data but not table
    b. Deletes table but not data in table
    c. Deletes table and data in table
    d. Deletes Database

28. With SQL, how can you return the number of records in the "Persons" table?
    a. SELECT COUNT(*) FROM Persons
    b. SELECT NO(*) FROM Persons
    c. SELECT COLUMNS(*) FROM Persons
    d. SELECT LEN(*) FROM Persons

29. If A and B are two tables, which Join gives all the common records between A and B
    a. Inner Join
    b. Left Outer Join
    c. Left Inner Join
    d. Full Outer Join

30. Which of the statements is the correct one?
    a. Select a.Column1, b.Column1 From TableA a Inner Join TableB b on a.Column2 = b.Column2
    b. Select a.Column1, b.Column1 From TableA a Inner Join TableB b
    c. Select a.Column1, b.Column1 From TableA a Inner Join TableB b on TableA = TableB
    d. Select a.Column1, b.Column1 From TableA , TableB b Inner Join on a.Column2 = b.Column2

SECTION B
Short Question Answer

Attempt any five (5) questions out of eight (8) questions (5*6=30)

1. What is Database? How is Data stored in Database? (3+3)) (Unit 1 : Introduction)
2. Explain in short about Relational and Network Database Models. (3+3) (Unit 2 : Relational databases)
3. What are data inconsistency and Atomicity? Give examples. (3+3)) (Unit 1 : Introduction)
4. What is an ER Model? List its advantages. (3+3) (Unit 6 : Data models)
5. Explain how a query is processed in SQL.(6) (Unit 3 : Retrieving data)
6. What are System Databases in SQL? Explain in Brief. (6) (Unit 3 : Retrieving data)
7. Create a table named "Laptop" to store the details of the laptops available with a Dealer. The table should store the data related to the Brand, Model, Price, ManufactureDate and warranty of the laptops. Warranty Period should be in months, The user should not be able to insert prices less than 1000. The Model of each laptop should be unique, Set the Default Warranty Period of each of the laptop to be 24 months.(6) (Unit 3 : Retrieving data)
8. What are Joins in SQL? Explain briefly. (6) (Unit 3 : Retrieving data)

SECTION C
Long Question Answer

Attempt any two (2) questions out of three (3) questions (2*20=40)
(Case study is Compulsory)

1. Explain how storing data in a Database System is advantageous over the traditional File Management system.(20)
2. What are Aggregate Functions in SQL? Explain each with examples.(20)
3. CASE STUDY
   Texas College of Management and IT needs a Database to keep track of the Student, Departments and Courses offered. Design an ER Model based on facts

- Student admits in College
- College has many Departments
- Each Department offers many courses
- Student can study different Courses. (20)

*****Good Luck*****