B.Tech. DEGREE EXAMINATION, NOVEMBER 2022
Sixth/ Seventh Semester

18CSC303J – DATABASE MANAGEMENT SYSTEMS
(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:
(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours   Max. Marks: 75

PART – A (25 × 1 = 25 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO

1. What is the output of the command SELECT * from emp where sal >1000?   `1  1  1  1`
   (A) Store employee salary greater than 1000
   (B) Retrieve employees whose salary is greater than 1000
   (C) Retrieve only one record of employees whose salary is greater than 1000
   (D) Select only employee to store in salary greater than 1000 from table

2. Which is scalable data base model?   `1  1  1  2`
   (A) E-R model
   (B) Relational model
   (C) Hierarchical model
   (D) Flat model

3. Which is not a domain constraints?   `1  1  1  3`
   (A) Not null
   (B) Check
   (C) Unique
   (D) Foreign key

4. Data manipulation language is used for _____.   `1  1  1  4`
   (A) Express the schema with notation
   (B) Expression the data base queries and updates
   (C) Managing database operation
   (D) Specify the database schema

5. Logical level of abstraction deals _____.   `1  1  1  5`
   (A) How to store to record
   (B) Hiding details form unauthorized user
   (C) Data storage in database and relationship among the data
   (D) Hiding details from any user

6. Which is not single value attribute?   `1  1  2  2`
   (A) Mobile number
   (B) Gender
   (C) Data of birth
   (D) Register number

7. Conversion of ER model into relational table for strong entity set with multi value attribute creates _____.   `1  1  2  2`
   (A) 1 table
   (B) 2 table
   (C) 3 table
   (D) 4 table

PART – B (5 × 10 = 50 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO

26. a. What is data manipulation language? Explain   `10  2  1  1`
   (i) Insert
   (ii) Update
   (iii) Delete
   (iv) Select
   Commands with example.

   (OR)

   b. Analyze the data base model of   `10  3  1  2`
   (i) Hierarchical
   (ii) Relational for practical deployment

27. a. Develop E-R model for online shopping system with proper notation.   `10  3  2  3`

   (OR)

   b. What are constraints? Explain domain constraints with SQL statements.   `2+8  2  2  4`

28. a. What is the use of join operation? How is the simple and outer join operation implemented in SQL? Give examples.   `2+8  3  3  5`

   (OR)

   b. What is trigger? How triggers are implemented in PL/SQL?   `2+8  2  3  1`

29. a. Give the notation and example code in relation algebra for the following operations   `10  3  4  2`
   (i) Outer join
   (ii) Assignment
   (iii) Select operation

   (OR)

   b. What is the pit fall in relational data base? How it can be rectified? Explain 1st normal form.   `10  3  4  3`

30. a. What is serialization? Explain testing of seriability with examples.   `2+8  2  5  4`

   (OR)

   b. Give   `5+5  3  5  5`
   (i) Dead lock detection mechanism
   (ii) Dead lock prevention mechanism

* * * * *

8. Foreign key _____. 1 1 2 3
   (A) Not allow null value
   (B) Is a primary key that will be a referential key for table
   (C) Is not a primary key
   (D) Is not a referential key

9. In E-R diagram specialization is indicated by 1 1 2 4
   (A) Double side arrow head
   (B) Line arrow head
   (C) Hollow arrow head
   (D) Filled arrow head

10. A programmer is associated with many project 1 1 2 5
   (A) It is one-to-many cardinality
   (B) It is many-to-one cardinality
   (C) It is one-to-any cardinality
   (D) It is one-to-one cardinality

11. The SQL command to insert employee name jack with ID-No-500 with job clerk is _____. 1 1 3 1
   (A) Insert emp values (500,jack, clerk)
   (B) Insert into emp values (500, 'jack', 'clerk')
   (C) Insert into emp (500, jack, clerk)
   (D) Insert into emp (500, 'jack', 'clerk')

12. Correlated subquery _____. 1 1 3 2
   (A) Is an inner query executed one time for outer query
   (B) Is executed one time for each record returned by outer query
   (C) Is executed multiple times
   (D) Is inner query executed multiple time for outer query returned by outer query

13. Which is correct for the trigger? 1 1 3 3
   (A) It is an event driven one
   (B) It is executed manually
   (C) In PL/SQL there are 10 events for trigger
   (D) PL/SQL not support triggers

14. Which is not a exception in PL/SQL 1 1 3 4
   (A) No data found
   (B) Too many rows
   (C) Value error
   (D) Length string

15. Which is not a valid step in query processing? 1 1 3 5
   (A) Parsing and translation
   (B) Optimization
   (C) Mapping of pointer
   (D) Evaluation

16. Relational algebra _____. 1 1 4 1
   (A) Is a procedural language
   (B) Is extended version of SQL
   (C) Is not supporting union operation
   (D) Is not having rename option

17. The statement: 1 1 4 2
   σ salary > 1000 (instructor) is _____.
   (A) Joining instructor whose salary is greater than 1000
   (B) Selecting instructor whose salary is greater than 1000
   (C) Inserting instructor whose salary is greater than 1000
   (D) Deleting instructor whose salary is greater than 1000

18. Functional dependency _____. 1 1 4 3
   (A) Avoid data redundancy
   (B) Avoid dependency
   (C) Not good for good database
   (D) Make database complex for query

19. Which is not a type of normalization? 1 1 4 4
   (A) 1st norm form
   (B) 2nd norm form
   (C) Bryce-codd normal form
   (D) 6th normal form

20. Condition for 2nd norm form 1 1 4 5
   (A) It must be 1st norm form
   (B) It must be functional independent non primary key attributes
   (C) It must have functional independency
   (D) It must be in Boyce-Codd normal form

21. Wait-die is a _____. 1 1 5 1
   (A) Time stamp based dead lock prevention mechanism
   (B) Dead lock update mechanism
   (C) Buffer management mechanism
   (D) Task management mechanism

22. Concurrency control is used _____. 1 1 5 2
   (A) To achieve better throughput
   (B) To control the execution time in processor
   (C) To achieve isolation and maintain consistency
   (D) To control task allocation

23. Dirty read problem occurs at _____. 1 1 5 3
   (A) Transaction failed while updating but read by another transaction before rollback
   (B) Read transaction failed
   (C) Read transaction reading wrong pointer
   (D) Reading of multi value attributes

24. When dead lock occurs _____ to solve it. 1 1 5 4
   (A) System must roll back to one of transaction and unlock the locked items
   (B) System must about the transaction
   (C) System must raise exception
   (D) System need not respond

25. Fuzzy check prints are _____. 1 1 5 5
   (A) Check points where the systems are in fuzzy state
   (B) Check point where transactions are blocked
   (C) Check point where transactions are moved from block state to execution state
   (D) Check point where transaction allows to update while buffer blocks being written out