Reg. No.															

B.Tech. DEGREE EXAMINATION, JUNE 2022

Sixth 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. Database is a _____. (A) Collection of inter related data (B) Collection of raw data (C) Collection of binary data (D) Collection of unstructured data	1	1	1	1.1.1
2. Arrange in the correct order (A) View level, physical level, logical level (B) Logical level, view level, physical level (C) Physical level, view level, logical level (D) View level, logical level, physical level	1	1	1	1.1.1
3. Create and insert are (A) DDL and DML respectively (B) DML and DCL respectively (C) DML and DDL respectively (D) DDL and TCL respectively	1	2	1	1.1.1
4. Drop table, table name is a (A) DDL command (B) DCL command (C) TCL command (D) DML command	1	2	1	1.1.1
5. DDL Datas are _____ automatically without _____. (A) Committed, manual commit (B) Deleted, delete (C) Recovered, manual recovery (D) Executed, manual execution	1	2	1	1.1.1
6. ER is defined as (A) Entity relationship (B) Enterprise relationship (C) Enterprise relation (D) Enterprise recovery	1	1	2	2.1.2
7. Write the correct function for select round (sysdate, 'year') from dual; (A) Round (d, format) (B) Round (d, 'format') (C) Round (SD, YEAR) (D) Round ('DD-MM-YY', 'YEAR')	1	1	2	2.2.2
8. Converts the string in a given format in to oracle data format (A) TO_DATE (Str, 'DATE') (B) TO_DATE (Str, 'format') (C) TO_Month (Str, 'Str') (D) TO_DATE (DATE, Str)	1	2	2	2.2.3

1 2 2 2.2.3

9. Power (m, n)
   (A) n power m
   (B) m power n
   (C) m×n power
   (D) m power m

1 2 2 2.2.3

10. Column data type references table (column) is an example syntax of
   (A) Primary key
   (B) Foreign key
   (C) Unique key
   (D) Super key

1 3 3 3.1.1.

11. How many primary keys are possible in a table?
   (A) Any number
   (B) 2
   (C) 5
   (D) 1

1 3 3 3.1.2

12. Which is the wrong one
   (A) Select * from employee where salary > 10000;
   (B) Select max (salary) from employees;
   (C) Select * from employees where salary > avg (salary);
   (D) Select min (salary) from employees;

1 3 3 3.1.2

13. Choose the correct one
   (A) Select salary from employees where salary > avg (salary);
   (B) Select salary from employees (salary>10000);
   (C) Select salary from employees where salary > (select avg (salary) from employees);
   (D) Select salary = avg (salary) from employees);

1 3 3 3.4.1

14. To apply set operations in 'Table A' and 'Table B'
   (A) Different column names can be used in table A and B
   (B) Common column names alone be used in table A and B
   (C) Common column names with matching data types alone be used in table A and B
   (D) Different column names with different data types can be used

1 3 3 3.4.1

15. A DDL command after any number of DML command
   (A) Stores the data permanently
   (B) No affect with DML commands
   (C) No effect with DDL command
   (D) Stores the DDL statement data alone

1 3 4 4.1.1

16. Eliminating partial dependency is equal to
   (A) 2NF
   (B) 1NF
   (C) Zero
   (D) None of the above

1 1 4 4.1.2

17. Normalization is the process of _____.
   (A) Eliminating (or) avoiding data redundancy
   (B) Re-structuring the tables
   (C) Works with DBMS program level
   (D) Works with transaction level

1 1 4 4.2.2

18. Functional dependency is a relationship between
   (A) Entities
   (B) Rows
   (C) Attributes
   (D) Tables

19.	A table is in BCNF if it is in 3NF and if every determinant is a _____ key. (A) Dependent (B) Normal (C) Candidate (D) Both normal and candidate	1	2	4	4.3.4
20.	Choose the correct symbol for the relational algebra operator 'SELECT' (A) π (B) ∪ (C) × (D) σ	1	2	4	4.3.4
21.	Collections of operations that form a single logical unit of work are called _____. (A) Views (B) Networks (C) Units (D) Transactions	1	2	5	5.2.1
22.	The 'all of none' is referred as (A) Isolation (B) Durability (C) Atomicity (D) Reliability	1	2	5	5.2.2
23.	Which of the following system is responsible for ensuring durability? (A) Recovery system (B) Atomic system (C) Concurrency control system (D) Complier system	1	2	5	5.3.1
24.	A transaction that has not been completed successfully is called as (A) Compensating transaction (B) Aborted transaction (C) Active transaction (D) Partially committed transaction	1	2	5	5.1.1
25.	The execution sequence in concurrency control are termed as (A) Serials (B) Schedules (C) Organizations (D) Time tables	1	2	5	5.1.2

PART – B (5 × 10 = 50 Marks)

Answer ALL Questions

		Marks	BL	CO	PO
26. a.i.	Differentiate between DBMS and file processing system. List any two advantages with DBMS.	5	4	1	1.3.1
ii.	Draw the DBMS system architecture with its all the components.	5	4	1	4.3.3
	(OR)				
b.	What is the significance of mapping cardinalities? Explain all the types with pictorial representations.	10	3	1	3.1.2
27. a.	Draw an extended ER diagram for Microsoft campus club (MCC) connected by an ABC college - An ABC college has decided to setup a MC club - MCC can be categorized based on the type. Quiz club, creater club - A student can join in any one of the MC clubs - Each MC club has a faculty advisor who trains the students - Each student can be identified by using id_no Include all the above requirement and model the MC club appropriately.	10	3	2	3.3.1
	(OR)				

	b. Draw a ER diagram for entire university governance, including all the major streams of the university, from academics to management. Kindly concentrate on creating relations between one another, without affecting the data integrity.	10	3	2	3.4.1
28.	a. How user query is executed in the query processing engine? Give a detail on the operations involved with neat sketch.	10	4	3	3.4.2
	(OR)				
	b.i. Write an example for using AFTER UPDATE TRIGGER using any employee relation.	5	4	3	4.1.1
	ii. Explain with example - Commit - Roll back - Save point	5	4	3	4.1.3
29.	a. Define functional dependency with respect to normal forms. How 2NF and 3NF can be resolved? Give an example scenario for the above situation, using 'STUDENT' relation. Note: column names can be generated with respect to student relation.	10	5	4	4.3.1
	(OR)				
	b.i. Give an example table structure for multi-valued dependency and define with required explanations.	5	5	4	4.3.4
	ii. Analyze the syntax for writing 'cursors' and list any two real time examples of cursors.	5	5	4	4.3.4
30.	a.i. Correlate system recovery and serializability, analyze the effect of cascading rollbacks.	5	5	5	5.1.2
	ii. How two phase commit protocol works in transaction management systems?	5	5	6	5.3.1
	(OR)				
	b. Draw an example scenario for dead lock. (Using transaction states (or) units). How dead lock prevention, detection and recovery works on different situations?	10	5	6	6.2.1

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