SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

Batch 2- Set C

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu
Academic Year: 2022-2023 (EVEN SEM)

Answer Key

Test: CLAT-1 **Date: 15.2.2023**
Course Code & Title: 18CSC303J Database Management system **Duration:** 50 min
Year & Sem: III & VI **Max. Marks:** 25
Instruction: MCQs to be collected within first 10 minutes

Course Articulation Matrix:

S.No.	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	CO1	H	M	L									

Part – A (5 x 1 = 5 Marks)

Instructions: Answer all

Q. No	Question	Marks	BL	CO	PO	PI Code
1	Section (sectname, wing, expenses) and Student (student_ID, name, sectname, fees). Here in both of these relations, the sectname attribute appears commonly. In this case, using common attributes in the relation schema is a way in which we can relate the _____ relations. a. Tuple of common b. Attributes of common c. Attributes of distinct **d. Tuple of distinct**	1	2	1	1	1.6.1
2	If Ramu wants to transfer an amount of Rs.10000 to Shamu. If failure occurs after removing Rs.10000 from Ramu account and before transferring to Shamu account then the problem caused is_____. **a.Data Atomicity** b.Data Isolation c.Data Redundancy d.Data Security	1	2	1	1	1.6.1
3	What does the following code snippet do? ALTER TABLE STUDENT ADD(ADDRESS VARCHAR2(20)); **A. Adds a Column called Address in the table student** B. Modify existing Column address that's present in the table student C. Invalid syntax D. Modify varchar size in existing address column	1	1	1	1	1.6.1
4	"Every department must have at least five courses offered every semester" must be expressed as a _____. A. Domain Constraints B. Referential Integrity **C. Assertion** d. Authorization	1	1	1	1	1.6.1
5.	Identify the type of the user based on the interaction with the database system. "A clerk in the university who needs to add a new instructor to department A invokes a program called new hire. This program asks the clerk for the name of the new instructor, her new ID, the name of the department (that is, A), and the salary". a. Application programmer **b. Naive Users** c. Sophisticated users d. Specialized users	1	1	1	1	1.6.1

Part – B
(2 x 4 = 8 Marks)

Instructions: Answer any 2

6 | **4** | **3** | **1** | **1** | **1.6.1**

Consider an organization wants to create and maintain the Database which frequently update the data according to the market fluctuations. The Database also prone to the data consistency and security issue due to its collaborative database management system across the branches.

i) Suggest set of procedures need to be followed by the DBA to create and maintain the database based on the above scenario. (2 Marks)

ii) What kind of strategies may be adopted by the DBA at the database level to maintain the data consistency and security? (2 Marks)

Answer:

i) Procedures need to be followed by the DBA:

DBA needs to Create the Table and insert the values into the table.

Update the table according to the market fluctuations' either using DDL and DML or trigger operation.

example: Table creation and update command

ii) DBA

Set the access privileges to the Database using Admin Login credentials.

Set the specific view level of Table among the users.

Impose the constraints over the table and through which admin can retain the data consistency.

7 | **4** | **3** | **1** | **2** | **2.7.2**

Write SQL queries on the basis of following table**.**

Empid	EmpName	Dept	Salary	Gender
101	Mahesh	Finance	32000	M
303	Vijay	HR	42500	M
401	Mansha	Finance	31500	F
603	Kamal	Computer	32150	M
604	Vandana	HR	42000	F
631	Sujata	Finance	39500	F

i. Increase salary of all employees by 1000.

```
update emp set salary=salary+1000;
```

ii. Delete records of female employees.

```
delete from emp where gender='F';
```

iii. Add a new field PhoneNo of integer type to table.

```
Alter table emp add phoneno int;
```

iv. Set the size of EmpName field to 40.

```
Alter table emp modify empname varchar(40);
```

8 | **4** | **3** | **1** | **2** | **2.6.1**

Explain why it is important to include a view level in the database architecture and what role this level plays in data abstraction.

Ans:

The view level in the database architecture is an important component that plays a critical role in data abstraction.

	The view level is responsible for defining how the data is presented to the users of the database. This level acts as an interface between the physical storage of the data and the users of the database, allowing them to access and manipulate the data without needing to understand the underlying storage structure. Reasons: 1. Data Security 2. Data Abstraction 3. Performance Optimization					
Part – C **Answer all (1 x 12 = 12 Marks)**						
9	You are working as a database designer for a large e-commerce company that sells a wide range of products. The company stores all its product information, customer information, and order information in a database. i) Explain different types of data models and their purpose, merits and demerits (6 marks) ii) Provide an example of when each type of data model would be used in the context of the e-commerce company (6 marks) Ans: i.) Each model (features/purpose, merits, demerits) explanation-(6 marks) The important and widely accepted models are: ✓ Hierarchical ✓ Network ✓ Entity relationship ✓ Relational ✓ Object oriented ii.) Example for each model in the context of ecommerce company-(6 marks)	**12**	**4**	**1**	**3**	**3.6.2**

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions