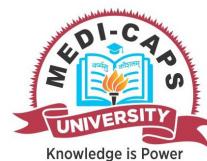|			Marks	BL	PO	CO
OR	iii.	What do you understand by database design? Explain with an suitable example.	6	2	3	1, 2
Q.5	i.	Explain rank function with an example.	4	2	4	1, 2
	ii.	What are the advantages and disadvantages of cursor in SQL?	6	2	4	1, 2
OR	iii.	Explain LEAD() and LAG() function with a suitable example.	6	2	4	1, 2
Q.6	i.	What is profitability analysis?	4	1	5	1, 2
	ii.	Explain Dense and Sparse indices in detail.	6	2	5	1, 2
OR	iii.	Explain various steps involved in query processing with example.	6	2	5	1, 2

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Faculty of Management Studies
End Sem Examination Dec 2024
MS3CO39 Introduction to DBMS & SQL

Programme: BBA   Branch/Specialisation: Business Analytics

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	PO	CO	PSO
Q.1	i.	The entity relationship set is represented in E-R diagram as- (a) Double diamonds (b) Undivided rectangles (c) Dashed lines (d) Diamond	1	1	1	1, 2	
	ii.	Which among the following are not among various operations in data warehousing? (a) Sticking (b) Dice (c) Drill down (d) Roll up	1	1	1	1, 2	
	iii.	What is the purpose of the SQL keyword "DISTINCT" in a SELECT statement? (a) To retrieve unique values from a column (b) To filter NULL values (c) To delete duplicate records (d) To sort the result set	1	1	2	1, 2	
	iv.	The SQL LIKE operator is used in which of the following clause? (a) Having (b) Select (c) Where (d) Group by	1	2	2	1, 2	
	v.	An attribute is a _____ in a relation. (a) Row (b) Column (c) Value (d) Tuple	1	1	3	1, 2	

vi. What is the method of specifying a primary key in a schema description? **1**   1   3   1, 2
(a) By writing it in bold letters
(b) By underlining it using a dashed line
(c) By writing it in capital letters
(d) By underlining it using a bold line

vii. Nesting level of stored procedure is applicable for _____. **1**   1   4   1, 2
(a) Triggers   (b) Views
(c) Functions   (d) All of these

viii. Which of the following tasks CANNOT be accomplished using SQL? **1**   1   4   1, 2
(a) Creating and modifying database structures
(b) Writing complex algorithms for data analysis
(c) Retrieving specific data from a database
(d) Adding new data to a database

ix. A_____ is a query that retrieves rows from more than one table or view: **1**   1   5   1, 2
(a) Start   (b) End
(c) Join   (d) All of these

x. What is a subquery? **1**   1   5   1, 2
(a) A subquery is a select-from-where expression that is nested within another query
(b) A subquery is any query that is nested within another query
(c) A subquery is a relation that is externally specified which can be used to handle data in queries
(d) A subquery is a condition that excludes all the invalid tuples from the database

Q.2 i. What is data definition language? List DDL statements and explain anyone with an example. **4**   2   3   1, 2

ii. Enlist and explain the advantages of RDBMS over traditional file system. **6**   2   3   1, 2

OR iii. Differentiate between OLAP and OLTP. **6**   4   3   1, 2

Q.3 i. Explain left and right outer join with examples. **4**   2   3   1, 2

ii. Consider the tables given below. Write the SQL queries for the questions given below: **6**   4   3   1, 2
T1 (Empno, Ename, Salary, Designation,)
T2 (Empno, Deptno.)
(a) Display all the details of the employee whose salary is lesser than 10,000
(b) Display the Deptno in which Employees with name starting with letter 'S' is working.
(c) Add a new column Deptname in table T2
(d) Change the designation of Geeta from 'Manager' to 'Senior Manager'
(e) Find the total salary of all the employees department wise
(f) Add Empno as primary key in existing table T1.

OR iii. Consider following schema and write SQL for given statements. Student (RollNo, Name, DeptCode, City) Department (DeptCode, DeptName) Result (RollNo, Semester, SPI) **6**   4   3   1, 2
(a) Display the name of students with RollNo whose name ends with 'sh'.
(b) Display department wise total students whose total students are greater than 500.
(c) List out the RollNo, Name along with CPI of Student. 07 3
(d) Create RollNo field as primary key for existing Student table.
(e) Display student name who got highest SPI in semester 1.
(f) Display the list of students whose DeptCode is 5, 6,7,10

Q.4 i. What is the purpose of data model? **4**   2   3   1, 2

ii. Differentiate between relational and non-relational schemas. **6**   4   3   1, 2

Marking Scheme

MS3CO39 (T) Introduction to DBMS and SQL (T)

Q.1	i	d) Diamond	1
	ii	a) Sticking	**1**
	iii	a) To retrieve unique values from a column	**1**
	iv	c) Where	**1**
	v	b) Column	**1**
	vi	d) By underlining it using a bold line	**1**
	vii	d) All of the mentioned	**1**
	viii	b) Writing complex algo.	**1**
	ix	c) Join	**1**
	x.	a) A subquery is a select-from-where expression that is nested within another query	**1**

Q.2　i　What is Data Definition Language?　　　2-marks　**4**
List DDL statements and explain anyone with an example.
　　　　　　　　2 marks

ii　Enlist and explain the advantages of RDBMS over traditional file system.　**6**
At least six –　　　　1 mark for each

OR　iii　Differentiate between OLAP and OLTP.　**6**
At least six –　　　　1 mark for each

Q.3　i　Explain left and right outer join with examples.　**4**
Left join – 2marks　right join-　　　2 marks

ii　Consider the tables given below. Write the SQL queries for the questions given below: T1 (Empno, Ename , Salary, Designation,) T2 (Empno, Deptno.) (1) Display all the details of the employee whose salary is lesser than 10000. (2) Display the Deptno in which Employees with name starting with letter 'S' is working. (3) Add a new column Deptname in table T2. (4) Change the designation of Geeta from 'Manager' to 'Senior Manager'. (5) Find the total salary of all the employees department wise. (6) Add Empno as primary key in existing table T1.　**6**
　　　　　1 mark for each

OR　iii　Consider following schema and write SQL for given statements. Student (RollNo, Name, DeptCode, City) Department (DeptCode, DeptName) Result (RollNo, Semester, SPI) 1. Display the name of students with RollNo whose name ends with 'sh'. 2. Display department wise total students whose total students are greater than 500. 3. List out the RollNo, Name along with CPI of Student. 07 3 4. Create RollNo field as primary key for existing Student table. 5. Display student name who got highest SPI in semester 1. 6. Display the list of students whose DeptCode is 5, 6,7,10　**6**
1 mark for each

Q.4　i　What is the purpose of data model?　**4**

　　　2　purpose – 1 mark for each

ii　Differentiate between relational and non-relational schemas.　**6**
At least six – 1 mark for each

OR　iii　What do you understand by database design? –　3 marks　**6**
Explain with an suitable example.-　3 marks

Q.5　i　Explain rank function with an example.　**4**
Rank function　　　4 marks

ii　What are the advantages　3 marks　**6**
disadvantages of cursor in SQL?-　3 marks

OR　iii　Explain LEAD() and LAG() function with a suitable example.　**6**
3 marks for each

Q.6　i　What is profitability analysis?　3 marks　**4**

ii　Explain Dense and Sparse indices in detail.　3 marks for each　**6**

iii　Explain various steps involved in query processing with example.　**6**
　　　3 marks for each

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[2]

[3]