INTERNAL ASSIGNMENT

Course Code: OMC 208 **Last Date of Submission: 01/06/2024**
Course Title: ADBMS Lab **Assignment No.: 01**

Note:
1. The assignment will have two parts, A and B. Part A is of 20 MCQ type questions.
2. Part B have 8 Descriptive Questions. Attempt any 5 out of it.

Part A: Multiple-Choice Questions

1. DML is uesd to work on?
A. Table Structure
B. Table Data
C. Table Columns
D. It is not used, but its a concept

2. Example of DQL is?
A. COMMIT
B. ROLLBACK
C. TRUNCATE
D. SELECT

3. Blank/White space padding is done in _____?
A. CHAR
B. VARCHAR2
C. NUMBER
D. DATE

4. To cearte a table Employee, having attributes Name (Char) and EmpID(varchar2, we use the syntax?
A. Create Table Employee (Name char(20), EmpID varchar2(10))
B. Create Table Employee where Name char(20), EmpID varchar2(10)
C. Create Table Employee where Name = 'Amit', EmpID = '101'
D. All of the above

5. The correct syntax of Insert command is?
A. Insert into table <table name> values (value1, value2,...valueN)
B. Insert into table values (value1, value2,...valueN)
C. Insert into <table name> values (value1, value2,...valueN)
D. All are same

6. To view the structure of a table, we use?
A. Describe table <tablename>
B. Describe <tablename>

C. Describe * from <tablename>
D. Describe * from table <tablename>

7. There are 2 propertis of a Primary Key:
A. Uniqueness and Null
B. Uniqueness and Distinct
C. Non-Uniqueness and Null
D. Uniqueness and Not Null

8. We can not insert null value in an attribute which is defined as Unique?
A. True
B. False
C. It depends on ituation
D. We can insert with the keyword Unique Key instead of Unique

9. With the predicate 'LIKE' we can use two wildcards characters:
A. * and &
B. * and _
C. % and _
D. % and &

10. We can take Union of two tables, having?
A. Same number of columns with different datatypes
B. Different number of columns with same dtatypes
C. Same number of columns with same datatypes
D. Different number of columns with different datatypes.

11. Joins which include only those tuples in the result that satisfy a join condition are known as:
A. Cartesian Joins
B. Inner Joins
C. Outer Joins
D. Full Outer Joins

12. What willbe the output of: Select LOWER('Hello') from dual
A. HELLO
B. Hello
C. hello
D. Error

13. What is Dual in Oracle?
A. Dual is in MySQL not in Oracle
B. Temporary Table having one row one column
C. Temporary Table having infinite rows and columns
D. A duplicate table which is used save user data

14. What will be the output of: Select Power(2,3) from dual
A. 8
B. 9
C. 6

D. Error

15. What will be the output of: Select Length('Data Base Management System') from dual
A. 27
B. 26
C. 25
D. 24

16. Which one is not the part of SQL?
A. DDL
B. DCL
C. DPL
D. DML

17. Which one is the DDL command?
A. CREATE
B. INSERT
C. DELETE
D. SELECT

18. CHAR datatype runs faster than VARCHAR2 datatype?
A. TRUE
B. FALSE
C. Depends on Software
D. None

19. If we want to retrieve data of both Employees 'Ramesh' and 'Dinesh', then command will be?
A. Select * from Employee Where Emp_Name = 'Ramesh' and Emp_Name = 'Dinesh'
B. Select * from Employee Where Emp_Name = 'Ramesh' or Emp_Name = 'Dinesh'
C. Select from Employee Where Emp_Name = 'Ramesh' and Emp_Name = 'Dinesh'
D. All of the above

20. Which one is not a Codd's Rule?
A. Information Rule
B. Systematic Treatment of Null Values
C. Logical Data Independence
D. Support of Multiple Interfaces

Part B: Subjective Questions

Answer the following questions in brief:

Q1. a) Differntiate DBMS and RDBMS.
b) Explain atleast 5 Codd Rules.

Q2. Draw an ERD for following scenario: A Candidate registers in Employment Agency. A candidate can be Un-empoyed or Employed. Employment Agency registers candidates Name, Age, Qualification, Address, Job Profile, Candidate_Registration number and Company_registration_no. Employment Agency also registers different Companies and sends Candidates record to the company. Company have Company Registration Number, Company name, Company Location, Company Profile, Number of Registered Employees. Company can recruit appropriate candidate through Employment Agency. Agency gains Commission on every recruitment.

Q3. What are the various forms of SELECT command? Explain each variation with the help of suitable examples.

Q4. Create following table 'Student', Insert given data, and solve given queries (No need to create primary key):
(Write syntax for every command, Create, Insert and other commands)

Name (Char)	Roll_No (Number)	Course (Varchar2)	Date_Of_Admn
Amit	1	BCA	12/July/19
Sumit	2	Null	13/June/19
Raghav	3	Null	Null
Suman	4	BCA	null

a) Retrieve data of all students.
b) Retrieve data of students whose course is null.
c) Find the name of student whose roll number is 2.
d) Delete all data.

Q5. Consider following tables and solve given queries: (You need not to create tables or insert any data, only solve queries and write syntax)

Student

Name	Roll_Number	Course	Address
Amit	1	BCA	Dehradun
Amit	2	BCA	Dehradun
Danish	3	BCA	Dehradun
Prakash	4	BCA	Dehradun
Zakir	5	BCA	Vikas Nagar

Faculty

Fac_Name	St_Roll_Number	Subject
Mr. Ajay	1	Math
Mr. Mohit	2	DBMS
Mr. Naveen	3	Hindi
Mr. Praveen	4	Physics

a) Write syntax for taking union of Name and Roll Number of both tables.
b) Find the Name of faculty who teach student having Roll Number = 4.
c) Find the address of student Danish.
d) Find the subject of student Prakash.

e) Define attribute Roll_Number of table Student as Foreign Key which will refer to St_Roll_Number attribute of Faculty table.

Q6. Create following tables and insert given data.

Candidate

Name (Not Null)	**Registration_No (Primary Key)**	**Qualification**	**Contact**
Amit Kumar	1001	MCA	1234567890
Sumit Kumar	1002	PhD	Null
Vinay Prakash	1003	B. Tech CS	Null
Somesh Chandra	1004	BCA	9087654321

Employment_Agency

Company_Name (Not Null)	**Candidate_Reg_No (Unique)**	**Company_ID (Primary Key)**	**Salary**
TCS	1001	CMM1	200000
Wipro	1002	CMM2	300000
Accenture	1003	CMM3	400000
Microsoft	1004	CMM4	300000

Q1. Find data of all those Candidates who's Contact is not known.
Q2. Find the Registration_No of Candidate whose salary is maximum.
Q3. Find the company name of Somesh Chandra.
Q4. Find the average salary of employees.
Q5. Define Registration_No as the foreign key referring Employment_Agency (Candidate_Reg_No).

Q7. Patient Admits in a Hospital. Each Patient is identified by P_No.
Other attributes of Patient are: Name, Age, Admit_Date.
Doctors serve for the Hospital. Doctors check Patients.
Each Doctor has unique Doct_ID.
Other attributes of Doctor are: Name, Specialization, Fees.
Hospital has attributes like: H_Name, No_of_Beds, Address.
Draw an ERD and create database for this scenario.
While entering the data in the database following constraints must be considered:
Patient's P_No should be the primary key, Patient's Name cannot be left blank.
Any columns of the Hospital table cannot be left blank.
Doc_ID should be the primary key.

You can assume some other attributes of your choice for each table.
Based on above tables, solve the following Queries:
1. Update the Age from 32 to 42 of the Patient having P_No=P3001.
2. Add a new column named 'H_Number' to the Hospital table.
3. Delete the record of Doctor whose ID='401'.
4. Find the record of Doctors whom Salary is not given.

Update Patient Set Age=42 where P_No=P3001;
Alter table Hospital Add H_Number number(5);
Delete from Doctor where Doc_ID='401';
Select * from Doctor where salary is null;

Q8. Customer opens an account in the Bank. Each Customer is identified by his Cust_no. Other attributes of Customer are: Name, Age, Acc_no. Bank offers Loan. Every Loan has a Unique Loan_No. Other attributes of Loan are: Loan_no, Loan_Amount, Loan_Date. Customer can lend Loan. Attributes of Bank are: Bank_Name, Branch_Location, NoOfCustomers. Draw an ERD and create database for this scenario.
While entering the data in the database following constraints must be considered:
Cust_no should be the primary key, Customer's Name cannot be left blank, Loan_no should be unique and cannot be left blank, Any columns of the Loan table cannot be left blank. Acct_no should be the primary key, You can assume some other attributes of your choice for each table.
Based on above tables, solve the following Queries:
1. Update the Name from 'Ajay kumar' to 'Vijay kumar' of the Customer having Acc_no=A01.
2. Add a new column named 'Bank_Owner' to the Bank table. 3. Delete the record of Loan whose Loan_no='401'.
4. Find the record of Customers who's Age is not given.