Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, June 2021

Course: Database System & Database Management **Semester: II**
Program: MBA(Digital Business) **Time: 03 hrs.**
Course code: DIGM 7002 **Max. Marks: 100**

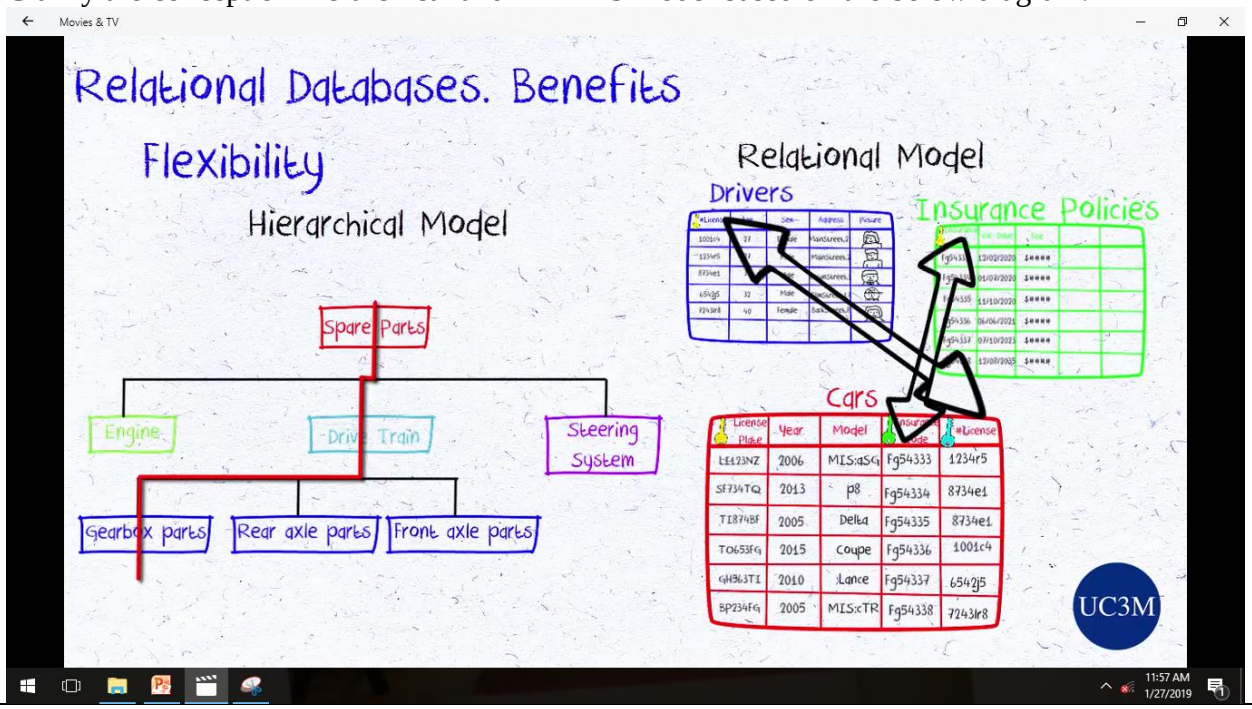
SECTION A

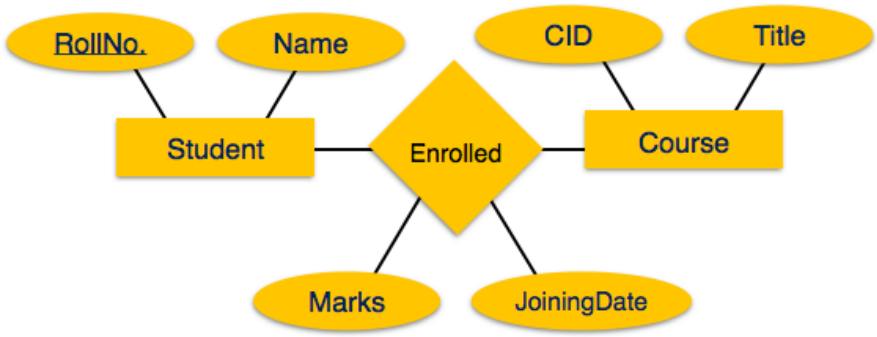
1. Each Question will carry 5 Marks
2. Instruction: Select/Write the correct answer(s)

S. No.	Question	CO
Q1	**Select correct option:** I. In the architecture of a database system external level is the (A) physical level. (B) logical level. (C) conceptual level (D) view level. II. Which of the following is a comparison operator in SQL? (A) = (B) LIKE (C) BETWEEN (D) All of the above III. In an E-R diagram an relationship is represent by a (A) rectangle. (B) ellipse. (C) diamond box. (D) circle. IV. To delete a particular column in a relation the command used is: (A) UPDATE (B) DROP (C) ALTER (D) DELETE	**CO1**

	V. In E-R Diagram derived attribute are represented by (A) Ellipse (B) Dashed ellipse (C) Rectangle (D) Triangle	
Q2	Assuming below CUSTOMERS table. Write following SQL queries: +----+----------+-----+-----------+----------+ | ID | NAME | AGE | ADDRESS | SALARY | +----+----------+-----+-----------+----------+ | 1 | Ramesh | 32 | Ahmedabad | 2000.00 | | 2 | Khilan | 25 | Delhi | 1500.00 | | 3 | kaushik | 23 | Kota | 2000.00 | | 4 | Chaitali | 25 | Mumbai | 6500.00 | | 5 | Hardik | 27 | Bhopal | 8500.00 | | 6 | Komal | 22 | MP | 4500.00 | | 7 | Muffy | 24 | Indore | 10000.00 | +----+----------+-----+-----------+----------+ a) Fetch ID, Name and Age fields from the CUSTOMERS table for a customer with name Hardik. b) Fetch ID, Name and Age fields from the CUSTOMERS table where salary is less than 2000 or age is equal to 25 years	**CO2**
Q3	Assuming CUSTOMERS table of question 2. Write following SQL queries: a) Update ADDRESS to Pune for a customer whose ID is 6 b) DELETE a customer, whose ID is 6	**CO2**
Q4	The Pincode column of table 'Post' is given below- **Pincode** 10001 120012 300048 281001 i. Write a MySQL command to display pincode starts with '1' ii. Which one is the correct output for the following query :- SELECT Pincode from Post where Pincode LIKE " 0%" ; i) 110001 ii) No Output	**CO1**

Q5	Answer the question based on the table VOTER given below: **Table : VOTER** | Column Name	Data type	Size	Constraints	Description
---	---	---	---	---
V_id	BIGINT	8	Primary key	Voter identification
Vname	VARCH AR	25	Not null	Name of the voter
Age	INT	3	Check>17	Age should not less than equal to 17
Address	VARCH AR2	30		Address of voter
Phone	VARCH AR	10		Phone number of the voter | (i) Write the command to delete all the rows of particular voter from the table voter where voter ID between 10 and 20. (ii) Delete the table physically.	**CO1**
Q6.	**Select correct option:** I. With SQL, how do you select all the records from a table named "Persons" where the "FirstName" is "Peter" and the "LastName" is "Jackson"? A. SELECT * FROM Persons WHERE FirstName<>'Peter' AND LastName<>'Jackson' B. SELECT * FROM Persons WHERE FirstName='Peter' AND LastName='Jackson' C. SELECT FirstName='Peter', LastName='Jackson' FROM Persons II. With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" starts with an "a"? A. SELECT * FROM Persons WHERE FirstName LIKE '%a' B. SELECT * FROM Persons WHERE FirstName LIKE 'a%' C. SELECT * FROM Persons WHERE FirstName='a' D. SELECT * FROM Persons WHERE FirstName='%a%'	**CO1**
SECTION B **1. Each question will carry 10 marks** **2. Instruction: Write short / brief notes**		
Q7	A) Write SQL to Create Client table with following attributes: • Cid (primary) • Cname (not null) • Cage (default 30) • Cemail (not null) • Ccity • Cmob(not null)	**CO2**

	B) Describe the concept of primary, candidate, composite and foreign keys with the help of examples.	
Q8.	Clarify the concept of Hierarchical and RDBMS model based on the below diagram:  	**CO2**
Q9.	Write SQL query: A)To create below table along with primary (client_id) and foreign key (branch_id). Assuming branch_id is the column of Branch Table. B)Create Branch table with columns branch_id (primary key), Branch name. C)Insert two records in both the Tables. Client **client_id** | **client_name** | **branch_id** 400 | Dunmore Highschool | 2 401 | Lackawana Country | 2 402 | FedEx | 3 403 | John Daly Law, LLC | 3 404 | Scranton Whitepages | 2	**CO2**

Q10.	Identify the entity, attributes and primary key of the below given diagram and convert that E-R diagram into equivalent SQL query to create various tables.  	**CO2**

Q11	Consider an **employee_tbl** table, which is having the following records:
	`SQL> SELECT * FROM employee_tbl;`
	`+------+------+------------+--------------------+`
	`| id | name | work date | daily typing pages |`
	`+------+------+------------+--------------------+`
	`| 1 | John | 2007-01-24 | 250 |`
	`| 2 | Ram | 2007-05-27 | 220 |`
	`| 3 | Jack | 2007-05-06 | 170 |`
	`| 3 | Jack | 2007-04-06 | 100 |`
	`| 4 | Jill | 2007-04-06 | 220 |`
	`| 5 | Zara | 2007-06-06 | 300 |`
	`| 5 | Zara | 2007-02-06 | 350 |`
	`+------+------+------------+--------------------+`
	
	A)Write output for the following SQL:
	
	i) SELECT COUNT(*) FROM employee_tbl WHERE name="Jack";
	ii) SELECT id, name, MIN(daily_typing_pages) FROM employee_tbl GROUP BY name;
	iii) SELECT MIN(daily_typing_pages) Least, MAX(daily_typing_pages) Maximum
	FROM employee_tbl;
	iv) SELECT AVG (daily_typing_pages) FROM employee_tbl;
	
	B) Write SQL to display following output:
	
	i) To count the number of records for Jack
	
	ii) To fetch minimum value of daily_typing_pages
	
	iii) Find all the records with maximum value for each name
	
	iv) Calculate average of all the dialy_typing_pages
	
	v) To calculate square root of all the dialy_typing_pages
		CO2

Section C

1. Each Question carries 20 (10X2) Marks.
2. Instruction: Write long answer.

Q12

Write SQL Commands for the questions on the basis of table Teacher.

Table : Teacher

No.	Name	Age	Department	Dateojjoin	Salary	Sex
1	Jugal	34	Computer	2007-02-10	12000	M
2	Shanti	31	History	2008-03-24	20000	F
3	Sandeep	32	Maths	2009-02-25	14000	M
4	Sangeeta	45	History	2007-04-15	20000	F
5	Rakesh	35	Computer	2007-05-17	21000	M

A) Write SQL query for the following:

(i) To show all information about the teacher of History department in descending order of their name .

(ii) To list the male teacher who are in Maths department.

(iii) To display Name, Salary, Age of all male teacher.

(iv) Update the Salary by increasing Rs. 1000 for female teacher.

(v) To Insert a new record in table Teacher with the following data :

9, 'Raja', 23, 'Hindi', '2005-08-19',12675, 'M'

(vi) Display the name of those teacher whose name started with alphabet 'S';

(vii) To Delete those records where Department is History.

(viii) Write SQL Command to drop the table Teacher.

B) Find the Output of following :

(i) SELECT ROUND (1.298,1);
(ii) SELECT POW(3,4);
(iii) SELECT LOWER('MYSQL QUERY LANGUAGE');
(iv) SELECT SUBSTR('MYSQL LANGUAGE', 7,8);

CO3