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

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

Course: Data Management **Semester: II**
Program: MBA BA **Time: 03 hrs.**
Course code: DSBA 7004 **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 an E-R diagram attributes are represented by (A) rectangle. (B) square. (C) ellipse. (D) triangle. II. In case of entity integrity, the primary key may be (A) not Null (B) Null (C) both Null & not Null. (D) any value. III. In an E-R diagram an entity set is represent by a (A) rectangle. (B) ellipse. (C) diamond box. (D) circle. IV. Which SQL statement is used to delete data from a database? (A) DELETE (B) REMOVE (C) COLLAPSE V. Which SQL statement is used to insert new data in a database? (A) ADD NEW (B) INSERT NEW (C) INSERT INTO (D) ADD RECORD	**CO1**

<table>
<tr><td>Q2</td><td>Assuming below CUSTOMERS table. Write following SQL queries:
<pre>
+----+----------+-----+-----------+----------+
| 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
+----+----------+-----+-----------+----------+
</pre>
a) Fetch ID, Name and Salary fields from the CUSTOMERS table for a customer with name pattern start with Ko.
b) Fetch ID, Name and Salary fields from the CUSTOMERS table where salary is greater than 3000 or age is less than 20 years.</td><td>CO2</td></tr>
<tr><td>Q3</td><td>Assuming CUSTOMERS table of question 2. Write following SQL queries:
a) Update ADDRESS to Pune for a customer whose ID is 4
b) DELETE a customer, whose Address is MP</td><td>CO2</td></tr>
<tr><td>Q4</td><td>Select correct option:

I. How can you change "Hansen" into "Nilsen" in the "LastName" column in the Persons table?

A. UPDATE Persons SET LastName='Hansen' INTO LastName='Nilsen'
B. UPDATE Persons SET LastName='Nilsen' WHERE LastName='Hansen'
C. MODIFY Persons SET LastName='Nilsen' WHERE LastName='Hansen'
D. MODIFY Persons SET LastName='Hansen' INTO LastName='Nilsen

II. With SQL, how can you insert "Olsen" as the "LastName" in the "Persons" table?
A. INSERT INTO Persons ('Olsen') INTO LastName
B. INSERT ('Olsen') INTO Persons (LastName)
C. INSERT INTO Persons (LastName) VALUES ('Olsen')</td><td>CO1</td></tr>
<tr><td>Q5</td><td>Write SQL query to create below table and insert records:

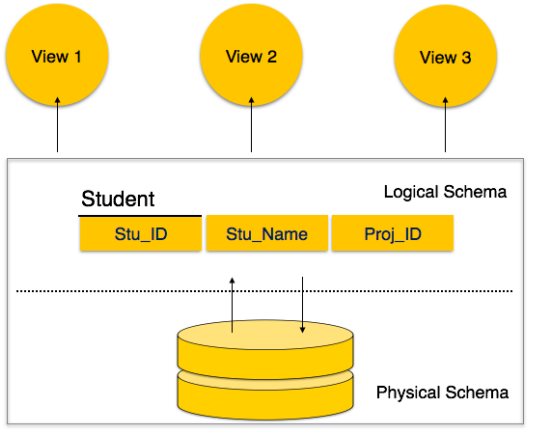
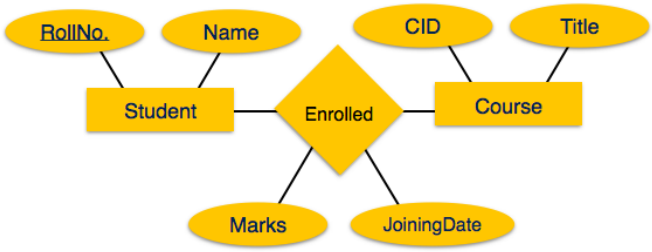
Table: GAMES
<table>
<tr><th>GCode</th><th>GameName</th><th>Number</th><th>PrizeMoney</th><th>ScheduleDate</th></tr>
<tr><td>101</td><td>Carom Board</td><td>2</td><td>5000</td><td>23-Jan-2004</td></tr>
<tr><td>102</td><td>Badminton</td><td>2</td><td>12000</td><td>12-Dec-2003</td></tr>
<tr><td>103</td><td>Table Tennis</td><td>4</td><td>8000</td><td>14-Feb-2004</td></tr>
<tr><td>105</td><td>Chess</td><td>2</td><td>9000</td><td>01-Jan-2004</td></tr>
<tr><td>108</td><td>Lawn Tennis</td><td>4</td><td>25000</td><td>19-Mar-2004</td></tr>
</table></td><td>CO1</td></tr>
<tr><td>Q6.</td><td>Write SQL query to create the structure of below table assuming emp_id as primary key and branch_id as foreign key (branch_id is column of branch Table):

Employee
<table>
<tr><th>emp_id</th><th>first_name</th><th>last_name</th><th>birth_date</th><th>sex</th><th>salary</th><th>branch_id</th></tr>
<tr><td>100</td><td>Jan</td><td>Levinson</td><td>1961-05-11</td><td>F</td><td>110,000</td><td>1</td></tr>
<tr><td>101</td><td>Michael</td><td>Scott</td><td>1964-03-15</td><td>M</td><td>75,000</td><td>2</td></tr>
<tr><td>102</td><td>Josh</td><td>Porter</td><td>1969-09-05</td><td>M</td><td>78,000</td><td>3</td></tr>
<tr><td>103</td><td>Angela</td><td>Martin</td><td>1971-06-25</td><td>F</td><td>63,000</td><td>2</td></tr>
<tr><td>104</td><td>Andy</td><td>Bernard</td><td>1973-07-22</td><td>M</td><td>65,000</td><td>3</td></tr>
</table></td><td>CO1</td></tr>
</table>

SECTION B

1. Each question will carry 10 marks

2. Instruction: Write short / brief notes

Q7	A) Write SQL to Create student record table with following attributes: • Sid (not null and primary) • Sname (not null) • Sage (default 20) • Semail • Scity • Smob(not null) B) Differentiate between update and alter SQL query with the help of example.	**CO2**
Q8.	Clarify the concept of physical and logical schema based on below diagram: 	**CO2**
Q9.	Describe different entities, attributes and relations of the below ER diagram and create various tables using SQL : 	**CO2**
Q10.	Table: GAMES GCode | GameName | Number | PrizeMoney | ScheduleDate 101 | Carom Board | 2 | 5000 | 23-Jan-2004 102 | Badminton | 2 | 12000 | 12-Dec-2003 103 | Table Tennis | 4 | 8000 | 14-Feb-2004 105 | Chess | 2 | 9000 | 01-Jan-2004 108 | Lawn Tennis | 4 | 25000 | 19-Mar-2004 Table: PLAYER PCode | Name | Gcode 1 | Nabi Ahmad | 101 2 | Ravi Sahai | 108 3 | Jatin | 101 4 | Nazneen | 103	**CO2**

	A)Write SQL query for the following: (i) To display the name of all Games with their Gcodes. (ii) To display details of those games which are having PrizeMoney more than 7000. (iii) To display the content of the GAMES table in ascending order of ScheduleDate. (iv) To display sum of PrizeMoney for each of the Number of participation groupings **B)Write output of the following SQL query :** (v) SELECT COUNT(DISTINCT Number) FROM GAMES; (vi) SELECT MAX(ScheduleDate),MIN(ScheduleDate) FROM GAMES; (vii) SELECT SUM(PrizeMoney) FROM GAMES; (viii) SELECT DISTINCT Gcode FROM PLAYER;	

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, MAX(daily_typing_pages) FROM employee_tbl GROUP BY name;
	iii) SELECT MIN(daily_typing_pages) least, MAX(daily_typing_pages) max FROM employee_tbl;
	iv) SELECT SUM(daily_typing_pages) FROM employee_tbl;
	
	B) Write SQL to display following output:
	
	i) To count the number of records for Zara
	
	ii) To fetch maximum 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

On the bases of given tables answer the following questions:

ENO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT
7369	Sunita Sharma	CLERK	7902	1980-12-17	2800	NULL	20
7499	Ashok Singhal	SALESMAN	7698	1981-02-20	3600	300	30
7521	Rohit Rana	SALESMAN	7698	1981-02-22	5250	500	30
7566	Jyoti Lamba	MANAGER	7839	1981-04-02	4975	NULL	20
7654	Martin S.	SALESMAN	7698	1981-09-28	6250	1400	30
7698	Binod Goel	MANAGE	7839	1981-05-01	5850	NULL	30
7782	Cheten Gupta	MANAGER	7839	1981-06-09	2450	NULL	10
7788	Sudhir Rawat	ANALYST	7566	1987-04-19	5000	NULL	20
7839	Kavita Sharma	PRESIDENT	NULL	1981-11-17	5000	NULL	10
7844	Tushar Tiwari	SALESMAN	7698	1981-09-08	4500	0	30
7876	Anand Rathi	CLERK	7788	1987-05-23	6100	NULL	20
7900	Jagdeep Rana	CLERK	7698	1981-12-03	4950	NULL	30
7902	Sumit Vats	ANALYST	7566	1981-12-03	3500	3600	20
7934	Manoj Kaushik	CLERK	7782	1982-01-23	5300	NULL	10

Write the SQL query for the following:

CO3

i. To list the employee name and his annual salary.

ii. To list the unique jobs from the table.

iii. To list the mgr which are in 7902, 7566, 7788.

iv. To list Comm as 1000 which are NULL.

v. To list all the columns in the ascending order of deptno and descending order of salary.

vi. To display the employee name and job of employees hired between Feb 20, 1981 and May 1, 1981.

vii. To list the name and salary of all the employees who earn more than 1200 and are in department 10 or 40.

viii. To list all the employees who do not have manager.

ix. To list name and salary of all employees who earn commissions.

x. To list the names of all employees where the second letter of their name is an 'a'.