

<b>Name:</b>	 <b>UPES</b> UNIVERSITY WITH A PURPOSE
<b>Enrolment No:</b>	

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

**Course: Introduction to SQL**  
**Program: BCA – IOT / BFSI**  
**Course Code: CSBC1005**

**Semester: I**  
**Time: 3 hrs.**  
**Max. Marks: 100**

**SECTION A (30 marks)**

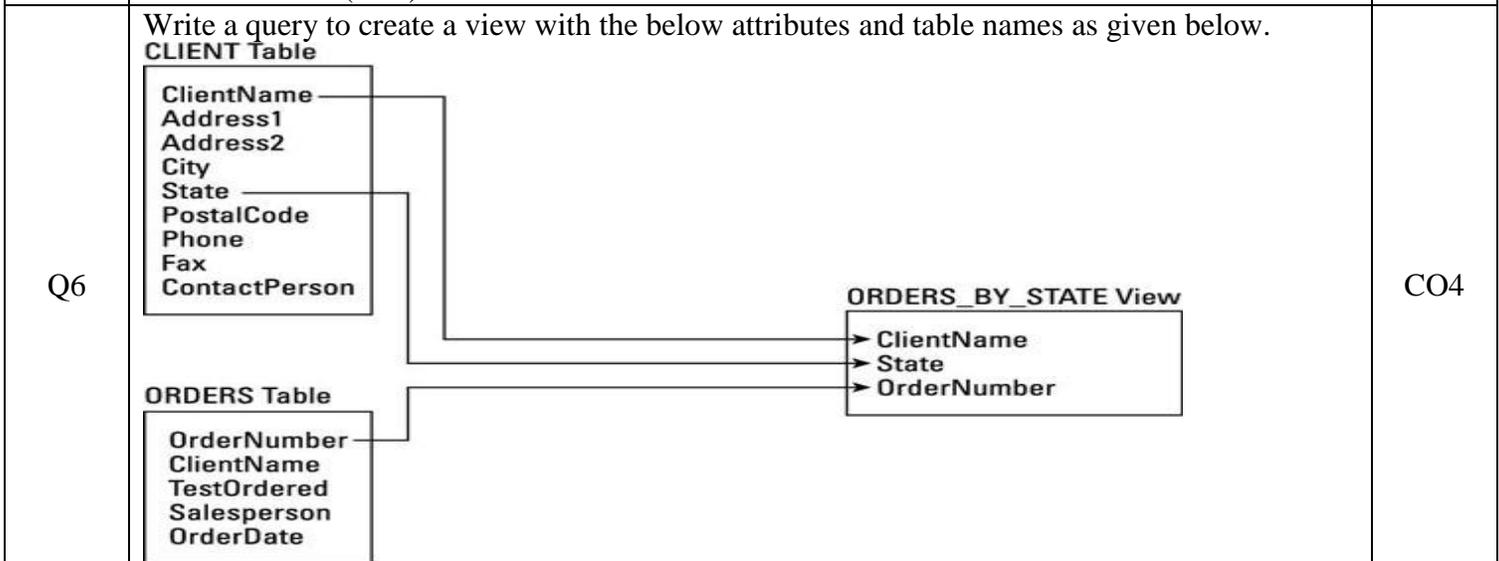
1. Each Question will carry 5 marks.
2. Instruction: Complete the Statement/Select the correct answer(s)

S.No.	Question	CO
Q1	Expand a. DDL b. DML c. DCL d. DBMS e. 2NF	CO1
Q2	Give all the correct query options from the list below a. create table EMPLOYEEES(empno number,name varchar2(50) not null,job varchar2(50),manager number, hiredate date,salary number(7,2),commission number(7,2),deptno number,constraint pk_employees primary key (empno),constraint fk_employees_deptno foreign key (deptno) references DEPARTMENTS (deptno)); b. create table EMPLOYEEES(empno numbers,name varchar2(50) not null,job varchar2(50),manager numbers, hiredate date,salary numbers(7,2),commission numbers(7,2),deptno numbers,constraint pk_employees primary key (empno),constraint fk_employees_deptno foreign key (deptno) references DEPARTMENTS (deptno)); c. create table EMPLOYEE(empno number,name varchar2(50) not null,job varchar2(50),manager number, hiredate date,salary number(7,2),commission number(7,2),deptno number,constraint pk_employees primary key (empno),constraint fk_employees_deptno foreign key (deptno) references DEPARTMENTS (deptno)); d. insert into EMPLOYEEES (empno, name, job, salary, deptno) values (4101,'Sam Smith','Programmer',5000,4001 ); e. insert into EMPLOYEEES (empno, name, job, salary, deptno) values (4101,Sam Smith,Programmer,5000,4001 ); f. create table student(ID char(4) primary key,Fname varchar2(10),deptID char(4)); g. create table student(ID char(4),Fname varchar2(10),deptID char(4),constraint primary key (ID),foreign key (deptID) references dept(deptID)); h. select dept_no,max(salary) from employess GROUP BY dept_no HAVING max(salary)>10000; i. select deptno,max(salary) from employess GROUP BY deptno HAVING max(salary)>10000;	CO2

Q3	Write the query to store the below given data in an Employee table. Give the create table and insert query. Use suitable datatypes in connection to the data.						CO2
	<b>e_id</b>	<b>e_name</b>	<b>e_salary</b>	<b>e_age</b>	<b>e_gender</b>	<b>e_dept</b>	
	1	Sam	95000	45	Male	Operations	
	2	Bob	80000	21	Male	Support	
	3	Anne	125000	25	Female	Analytics	
	4	Julia	73000	30	Female	Analytics	
	5	Matt	159000	33	Male	Sales	
6	Jeff	112000	27	Male	Operations		

Q4	List of queries are						CO2
	<ul style="list-style-type: none"> <li>• INSERT</li> <li>• CREATE</li> <li>• GRANT</li> <li>• TRUNCATE</li> <li>• ALTER</li> <li>• DELETE</li> <li>• REVOKE</li> <li>• UPDATE</li> <li>• DROP</li> <li>• MERGE</li> </ul>						
Group the above given queries into the 3 categories							CO2
DML-							
DDL-							
DCL-							CO2

Q5	Give the answers for the below given functions						CO3
	a. TRUNC(67.893,2)						
	b. TRUNC(67.896,2)						
	c. ROUND(56.678,2)						
	d. MOD(3401,100)						
	e. FLOOR(2.83)						



**SECTION B (50 marks)**

- Each Question will carry 10 marks.
- Instruction: Write short/brief notes.

Q7

Assume, a video library maintains a database of movies rented out.

FULL NAMES	PHYSICAL ADDRESS	MOVIES RENTED	SALUTATION
Janet Jones	First Street Plot No 4	Pirates of the Caribbean, Clash of the Titans	Ms.
Robert Phil	3 <sup>rd</sup> Street 34	Forgetting Sarah Marshal, Daddy's Little Girls	Mr.
Robert Phil	5 <sup>th</sup> Avenue	Clash of the Titans	Mr.

Define Normalization. Normalize the table to 1NF, 2NF and 3NF. Give the normalized form table's structure and the rules satisfied for each normal forms.

CO1

Q8

Discuss on Data Modelling and the various symbols in crow foot notation in ER modelling.

CO1

Q9

Write the correct create table queries with the below given constraints to create the student and course table. Also specify the insert query to add the below given data into the tables. Consider suitable datatypes.

<u>studentId</u>	firstName	lastName	courseId
L0002345	Jim	Black	C002
L0001254	James	Harradine	A004
L0002349	Amanda	Holland	C002
L0001198	Simon	McCloud	S042

Foreign Keys

Relationship

Primary Keys

<u>courseId</u>	courseName
A004	Accounts
C002	Computing
P301	History
S042	Short Course

CO2

Consider the below given table Employee to answer the below questions.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	RETIRED_DATE	JOB_ID	SALARY	MANAGER_ID	DEPARTMENT_ID
1	301 Rick	Dayle	RDAYLE	18-MAR-10	AD_PRES	8000	124	90
2	302 Meena	Rac	MRAC	21-SEP-11	AD_VP	11000	149	90
3	303 Mex	Haan	MHAAN	13-JAN-10	AD_VP	9500	149	80
4	304 Alexandra	Runold	ARUNOLD	03-JAN-11	IT_PROG	7500	124	60
5	305 Bruk	Ernst	BERNST	21-MAY-10	IT_PROG	6000	149	60
6	306 Dravid	Aust	DAUST	25-JUN-09	IT_PROG	4800	124	60
7	307 Raj	Patil	RPATIL	05-FEB-12	IT_PROG	4800	201	60
8	308 Rahul	Bose	RBOSE	17-AUG-12	FI_MGR	12008	124	100
9	309 Dany	Fav	DFAV	16-AUG-11	FI_ACCOUNT	9000	101	100

Q10

CO3

1. Find the highest, lowest, sum, and average salary of all employees. Label the columns Maximum, Minimum, Sum, and Average, respectively. Round your results to the nearest whole number.
2. Find the difference between the highest and lowest salaries.
3. Find the count of employees in the organization.
4. Find the count of employees working in each department.
5. Modify the query to display the minimum, maximum, sum, and average salary for each job type.

Consider the above given table Employee in Q10 to answer the below questions.

Q11

CO3

1. The HR department needs to displays the last name and hire date of any employee in the same department as the employee whose name is Davies (excluding that employee).
2. Create a report that displays the employee number, last name, and salary of all employees who earn more than the average salary. Sort the results in ascending order by salary.
3. Write a query that displays the employee number and last name of all employees who work in a department with any employee whose last name contains the letter "u."
4. The HR department needs a report that displays the last name, department number, and job ID of all employees whose department location ID is 1700.
5. Create a report for HR that displays the department number, last name, and job ID for every employee in the Executive department.

(OR)

Discuss on SET operators in Oracle database.

**SECTION-C (20 marks)**

- 1. Each Question will carry 20 marks.**
- 2. Instruction: Write long answer.**

Q12	<p>a. Identify the various read-only set of in-built views in the Oracle database Data Dictionary? Discuss all the view of the items under it. (10 Marks)</p> <p>b. State the purpose of Sequence and give the syntax to create a sequence and use it. Explain with an example.(10 Marks)</p> <p style="text-align: center;"><b>OR</b></p> <p>a. Define and list the advantages of using privileges in oracle? Discuss the types of privileges and using it with a sample query. (10 Marks)</p> <p>b. State the purpose of Synonym and give the syntax to create a synonym and use it. Explain with an example. (10 Marks)</p>	CO4
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