

<b>Name:</b> <b>Enrolment No:</b>	 <b>UPES</b> <small>UNIVERSITY WITH A PURPOSE</small>
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**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2019**

**Course: Introduction to SQL**  
**Program: BCA IOT/ BFSI**  
**Course Code: CSBC1005**  
**Instructions: Answer all questions.**

**Semester: I**  
**Time 03 hrs.**  
**Max. Marks: 100**

**SECTION A**

S. No.		Marks	CO
Q 1	List the various functions of DBMS with query and example.	4	CO1
Q 2	Differentiate DROP and TRUNCATE commands of SQL with suitable example.	4	CO2
Q 3	List the various SET operators used in SQL with its functionality.	4	CO3
Q 4	What is LOB? Give the types of LOB object with its purposes?	4	CO2
Q 5	State the purpose of Synonym and give the syntax to create a synonym and use it.	4	CO4

**SECTION B**

Q 6	Define Normalization and its purpose in database design. Discuss 1NF, 2NF and 3NF with an relevant example.	10	CO1
Q 7	Explain the three level architecture of DBMS with the diagram.	10	CO1
Q 8	Discuss on the purpose of GROUP BY and HAVING clause in SQL with suitable example.	10	CO3

Q 9	<p>Consider the table Product (pid, pname, price, category, manufacturer) and give the query to generate the below given reports</p> <ol style="list-style-type: none"> <li>Product name who have maximum price</li> <li>Product name who have minimum price</li> <li>The average price of all products</li> <li>The number of products in the company</li> <li>Specify the various category in the company</li> </ol> <p style="text-align: center;"><b>OR</b></p> <p>Illustrate the various types of Joins in SLQ with suitable examples.</p>	10	CO3
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### SECTION-C

Q 10	<p>a. What is DDL. Specify the syntax of any 4 DDL queries with suitable examples.(10 Marks)</p> <p>b. Develop a relation Employee as below given specification and constraints. (6 Marks)</p> <ul style="list-style-type: none"><li>• Make sure ID range is between 1000 and 4000</li><li>• Create the FK constraint as on deleting any department the emp table id should change to Null</li></ul> <table border="1"><thead><tr><th>Column Name</th><th>ID</th><th>LAST_NAME</th><th>FIRST_NAME</th><th>DEPT_ID</th></tr></thead><tbody><tr><td>Key Type</td><td></td><td></td><td></td><td></td></tr><tr><td>Nulls/Unique</td><td></td><td></td><td></td><td></td></tr><tr><td>FK Table</td><td></td><td></td><td></td><td>DEPT</td></tr><tr><td>FK Column</td><td></td><td></td><td></td><td>ID</td></tr><tr><td>Data type</td><td>NUMBER</td><td>VARCHAR2</td><td>VARCHAR2</td><td>NUMBER</td></tr><tr><td>Length</td><td>7</td><td>25</td><td>25</td><td>7</td></tr></tbody></table> <p>c. Write suitable query to perform following actions.(4 Marks)</p> <ul style="list-style-type: none"><li>• Modify the EMP table to allow for longer employee last names of size as 50</li><li>• Confirm your modification.</li></ul>	Column Name	ID	LAST_NAME	FIRST_NAME	DEPT_ID	Key Type					Nulls/Unique					FK Table				DEPT	FK Column				ID	Data type	NUMBER	VARCHAR2	VARCHAR2	NUMBER	Length	7	25	25	7	20	CO2
Column Name	ID	LAST_NAME	FIRST_NAME	DEPT_ID																																		
Key Type																																						
Nulls/Unique																																						
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FK Column				ID																																		
Data type	NUMBER	VARCHAR2	VARCHAR2	NUMBER																																		
Length	7	25	25	7																																		
Q 11	<p>a. Identify the object used to speed-up the retrieval process of data in oracle using pointers? Discuss on its types and how its created. (10 Marks)</p> <p>b. Define and list the advantages of using views in oracle? Discuss view creation and using it with a sample query. (10 Marks)</p> <p style="text-align: center;"><b>OR</b></p> <p>a. State the purpose of Sequence and give the syntax to create a sequence and use it. (10 Marks)</p> <p>b. Discuss the types of database security and the relevant SQL queries to manage them.(10 Marks)</p>	20	CO4																																			

