

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Database Management Systems and Data Modelling

Semester: IV

Programme: BCA

CODE: CSBC2002

Time: 03 hrs.

Max. Marks: 100

Instructions:

SECTION A

S. No.	Question	Marks	CO
Q 1	Elaborate the concept of Database development process.	4	CO1
Q 2	Write SQL Queries to find out Length of the string “Oracle Internet Academy @ UPES”? Position of “I” in “Oracle Internet Academy @ UPES”	4	CO4
Q 3	Query the data dictionary for each of the following: USER_TABLES USER_OBJECTS USER_CATALOG or USER_CAT	4	CO3
Q 4	Explain concept of Check constraints with example	4	CO5
Q 5	Define the term Database transaction ,COMMIT, ROLLBACK and SAVEPOINT.	4	CO6

SECTION B

Q 6	CREATE TABLE as per the schema given in wf_countries Table Design of Oracle Academy database WF_COUNTRIES WF_LANGUAGES WF_WORLD_REGIONS Apply PK, FK , constraints on Area and population should have values >0. Insert 2 records in each table.	10	CO3
Q 7	Explain the usage of for a view in database. <ol style="list-style-type: none"> 1. Create a simple view called view_d_songs that contains the ID, title and artist from the DJs on Demand table for each “New Age” type code. In the subquery, use the alias “Song Title” for the title column. 2. Create a another view based on the DJs on Demand COPY_D_CDS table. Name the view read_copy_d_cds. Select all columns to be included in the view. Add a WHERE clause to restrict the year to 2000. Add the WITH READ ONLY option. 3. Issue a DROP view_read_copy_d_cds. Execute a SELECT * statement to verify that the view has been deleted. 	10	CO6

Q 8	<p>Write SQL statements using group functions</p> <ol style="list-style-type: none"> Write a query that will return both the maximum and minimum average salary grouped by department from the employees table. Write a query that will return the average of the maximum salaries in each department for the employees table. How many songs are listed in the DJs on Demand D_SONGS table? In how many different location types has DJs on Demand had venues? Create a query that will return the average order total for all Global What was the hire date of the last Oracle employee hired? 	10	CO5
Q 9	<p>Elaborate the concept of sequence and Index. List three benefits of using SEQUENCES.</p> <ol style="list-style-type: none"> Write out the syntax for seq_d_songs_seq to view the current value for the sequence. Use the DUAL table. Create a nonunique index (foreign key) for the DJs on Demand column (cd_number) in the D_TRACK_LISTINGS table. Use the Oracle Application Express SQL Workshop Data Browser to confirm that the index was created. <p>OR</p>	10	CO6
	<p>Demonstrate the use of Revoke and Grant statement with example. Specify the advantages of a role to a DBA?</p> <p>Write SQL commands to :</p> <ol style="list-style-type: none"> Allow Scott to SELECT from and UPDATE the d_clients table? Allow everybody the ability to view the d_songs table? Revoke the ability to delete from the employees table from the manager role 		CO6
SECTION-C			
Q 10	<ol style="list-style-type: none"> Elaborate the concept of normalization. Explain 1NF,2NF and 3NF with example Perform self-join queries using Oracle Academy database schema <ol style="list-style-type: none"> Display the employee's last name and employee number along with the manager's last name and manager number. Label the columns: Employee, Emp#, Manager, and Mgr#, respectively. Display the names and hire dates for all employees who were hired before their managers, along with their managers' names and hire dates. Label the columns Employee, Emp Hired, Manager, and Mgr Hired, respectively. Write a report that shows the hierarchy for Lex De Haans department. Include last name, salary, and department id in the report. 	20	CO2 CO5
Q 11	<p>Explain the main difference between correlated and non-correlated subqueries? Use Oracle Academy database schemas and perform following subqueries</p> <ol style="list-style-type: none"> Write a query to return all those employees who have a salary greater than that of Lorentz and are in the same department as Abel. Write a query to return all those employees who have the same job id as Rajs and were hired after Davies. What DJs on Demand events have the same theme code as event ID = 100? 	20	CO5

	<p>4. What is the staff type for those Global Fast Foods jobs that have a salary less than those of any Cook staff-type jobs?</p> <p>5. Write a query to return a list of department id's and average salaries where the department's average salary is greater than Ernst's salary.</p> <p>6. Return the department ID and minimum salary of all employees, grouped by department ID, having a minimum salary greater than the minimum salary of those employees whose department ID is not equal to 50.</p> <p>OR</p>		
	<p>Design an ER Diagram for library management system in a university. Specify all assumption and proper constraints.</p>	20	CO2

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SECTION A

S. No.		Marks	CO
Q 1	Elaborate the use of ALTER command	4	CO3
Q 2	List disadvantages of file system	4	CO1
Q 3	List the changes that can and cannot be made to a column.	4	CO3
Q 4	Explain the term PK,FK ,COMMIT,ROLLBack.	4	CO3,6
Q 5	Write SQL Queries to find out Length of the string “Oracle Internet Academy @ UPES”? Position of “I” in “Oracle Internet Academy @ UPES”	4	CO4

SECTION B

Q 6	List group function along with sql statements	10	CO5
Q 7	Elaborate the concept of normalization. Explain 1NF,2NF 3NF with example.	10	CO2
Q 8	CREATE TABLE as per the schema given in Global Fast Foods Table Design of Oracle Academy "F_STAFFS" "F_ORDERS" "F_CUSTOMERS" Apply PK, FK constraints	10	CO3
Q 9	Explain the usage of for a view in database. a) Create a simple view called view_d_songs that contains the ID, title and artist from the DJs on Demand table for each “New Age” type code. In the subquery, use the alias “Song Title” for the title column. b) Create a another view based on the DJs on Demand COPY_D_CDS table. Name the view read_copy_d_cds. Select all columns to be included in the view. Add a WHERE clause to restrict the year to 2000. Add the WITH READ ONLY option. c) Issue a DROP view_ read_copy_d_cds. Execute a SELECT * statement to verify that the view has been deleted.	10	CO6
	OR Demonstrate the use of Revoke and Grant statement with example. Specify the advantages of a role to a DBA? Write SQL commands to :		

	<p>d) Allow Scott to SELECT from and UPDATE the d_clients table?</p> <p>e) Allow everybody the ability to view the d_songs table?</p> <p>f) Revoke the ability to delete from the employees table from the manager role</p>		
SECTION-C			
Q 10	<p>Perform following join queries using Oracle Academy database schema</p> <ol style="list-style-type: none"> 1. Return the first name, last name, and department name for all employees including those employees not assigned to a department. 2. Return the first name, last name, and department name for all employees including those departments that do not have an employee assigned to them. 3. Return the first name, last name, and department name for all employees including those departments that do not have an employee assigned to them and those employees not assigned to a department. 4. Create a query of the DJs on Demand database to return the first name, last name, event date, and description of the event the client held. Include all the clients even if they have not had an event scheduled. 5. Using the Global Fast Foods database, show the shift description and shift assignment date even if there is no date assigned for each shift description. 	20	CO5
Q 11	<p>What is the purpose of using a subquery?</p> <p>Use Oracle Academy database schemas and perform following subqueries</p> <ol style="list-style-type: none"> 1. What DJs on Demand d_play_list_items song_id's have the same event_id as song_id 45? 2. Which events in the DJs on Demand database cost more than event_id = 100? 3. Find the track number of the song that has the same CD number as "Party Music for All Occasions." 4. List the DJs on Demand events whose theme code is the same as the code for "Tropical." 5. What are the names of the Global Fast Foods staff members whose salaries are greater than the staff member whose ID is 12? 6. Which Oracle employees have the same department ID as the IT department? <p>OR</p>	20	CO5
	Design an ER Diagram for semester Examination process in a university. Specify all assumption and proper constraints.		CO2