UNIVERSITY OF MUMBAI
Practical Examination –November 2017
M.C.A Semester – III (Choice Based)
LABORATORY L301
[DBMS & Software Testing]

Duration: 3 hours **Seat No: _____**
Marks: 40 Marks
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PART A (25 Marks)

Q. 1 A)	Customer(Cust id (PK), cust_name) Item(item_id(PK), item_name, price) Sale(bill_no(PK), bill_data, cust_id(FK), item_id(FK), qty_sold) 1. Create the table 2. Insert records 3. List the item details which are sold as of today 4. Create a synonym for the Customer table 5. Create a view which lists the item bought by custid 4	10
B)	Write a Pl/SQL trigger on item that shall not allow insert or update if the value specified for the price is less than 0.	10
C)	Create table employee with attributes empid , name, address,DOB, mobile No. and also three range partitions based on employee id asempid< 20 ,empid . < 40,empid< 60. Display the data of every partition.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. AUTHOR (Author-id, AName, City, Country) PUBLISHER (Publisher-id, Name, City, Country) CATALOG (Book-id, title, author-id, Publisher-id, Category, Pub_date, Price) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) Change address of the author 'Kartik Desai' with 'Virar'. d) Display only distinct values of city from Authors table. e) Display author name and category from two different tables.	10
B)	Write a PL/SQL block for preparing a Net Salary, given employee on following table Emp (eno, ename, address, city) Salary (eno, basic, da, hra, it) Net_Salary (eno, total_allowance, total_deduction, netpay) Notes : D.A. = 59% of basic , H.R.A. = 500, I.T. = 2% of basic Total_Allowance = Basic + D.A. + H.R.A., Total_Deduction = I.T. Netpay = Total_Allowance – Total_Deduction. Display the data from Net_salary after execution of PL/SQL block.	10
C)	a) Create a table book details with attribute book id, book title, author, price. Also partition table into 4 partition using HASH partitioning b)Display content of partitions p3	5

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PART A (25 Marks)

Q.1	A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Employee (employee name, street, city) Works (employee name, company name, salary, doj) Company (company name, city) Manager (employee name, manager name) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) Find the names, streets and cities of residence of all employees who work for 'First bank corporation' and earn more than 10,000. d) Find the employees in the database who live in the same cities as the companies for which they work. e) Find those companies whose employees earn a higher salary on average than the average salary at 'First Bank Corporation'.	10
	B)	Write a PL/SQL function to return the name of the employee in a given company name.	10
	C)	Create table Bank with fields BankId, BName, Location. Partition the Bank table based on Location as per following. BK1 = (Mumbai, Pune, Nashik), BK2 = (Lucknow, Kanpur, Varanasi) BK3 = (Chandigarh, Mohali, Amritsar), BK4 = (GandhiNagar, Ahmedabad, Surat) Insert 4 records in Bank table.	5

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PART A (25 Marks)

Q. 1 A)	Customer(Cust_id(primarykey),cust_name,city,street,address,ph_number) Item(item_id(primary key), item_name, price) Sale(bill_no(primarykey),bill_date,cust_id,item_id(FK),qty_sold) 1. Create the tables 2. Insert records 3. Give a list of bills for the items purchased by cust id 27 4. Create a view to display the customers who purchased items whose price is greater than 1000 5. Display the maximum price of any item	10
B)	Write a PL/SQL function to display persons' ageafter accepting the dob from the user.	10
C)	Create a table customer with the attributescust_no, cust_name, product and price. Create an ADT name_typewith the attribute fname, mname and lname to store the name details.Display the first name of the customer who purchased'Monitor'.	5

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PART A (25 Marks)

Q. 1 A)	Student(Stud_no(PK),Stud_name,Year) Book(book_no(PK), book_name, author) Iss_rec(iss_no(PK), iss_date, Stud_no, book_no(FK)) 1. Create the tables 2. Insertrecord. 3. Give year wise count of books taken by the students. 4. List all the issue details in reverse order of date 5. Add a column city columns in the table Student 6. lists out student staying in the same city in which 'Keshav' is staying	10
B)	Write a PL/SQL block to display the books which student 'Amit' has issued	10
C)	Create sales table with attributes sales_id, sales_person_name, DOB, date_of_joining, sales_person_region with 3 partitions upon sales_person_region using list partition method. Display the contents of each partition.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Suppliers(<u>sid</u>, sname, address) Parts(<u>pid</u>,pname,color) Catalog(<u>sid, pid</u>, cost) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table c) Find the sids of suppliers who supply some red or green part. d) Display the total count of pid group by color e) Create view on catalog where cost greater than 2000.	10
B)	Write a Cursor to display the employee number, name, department and salary of first employee getting the highest salary. Emp (eno, ename, department, address, city) Salary (eno, salary)	10
C)	Create three partition table scholar using List partition on city column for the table scholar(sid,sname,address,city,per_of_marks,specialization) Display the contents of each partition	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. PERSON (driver_id,name,address) CAR (Regno,model,myear) ACCIDENT (report_number,acc_date,location) OWNS (driver-id,regno) PARTICIPATED (driver_id,regno,report_number,damage_amount) 1. Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. 2. Enter atleast 5 records in a table. 3. List all the personsname, report number who have encountered an accident in the location 'Thane' 4. List the entire person who has suffered the most recent accident. 5. List the damage amount of the car model 'Swift'.	10
B)	Write a PL/SQL procedure to display all the accidents in the specified month.	10
C)	Create table Employee with attributes empid, name, age, salary and joining date by using hash partition based on employee salary with minimum 3 partitions.	5

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PART A (25 Marks)

Q. 1 A)	employee(emp_id (PK),emp_name) paydetails(emp_id,dept_name, basic, deductions, additions, DOJ) payroll(emp_id (FK), pay_date) 1. Create the tables 2. Insert records in the table. 3. Define indexondept_name column. 4. Drop primary key constraint from employee table 5. Create a view to display the emp_name and pay_date	10
B)	Write a PL/SQL blockto list the details of employees working in 'Testing' department by using cursors.	10
C)	Create person type with attributes person_id, person_name and person_addr. Create a person_obj table of person type. Insert and display the details of the table.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types Employee(empid,fname,lname,age,address,salary,did) Dept(did,budget,managerid) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation c)Find the managerid who manage the department with largest budget. d) Write a SQL command to describe the structure of each table e)Write a SQL command to rename table name from Employee to Employee_salary	10
B)	Write a pl/sql block which accepts empno from user. If salary of that employee is less than 20000, increment it by 10% of salary. Insert the empno and updated salary in the table UPDATED_EMP(eno,sal,oper_date); EMP1(empno, ename,salary);	10
C)	a)Create table student with attributes rollNo. , name, address, DOB, mobile No. , and also three partitions based on students roll No. As roll No. < 20 ,roll No. < 40, roll No. < 60 b) Display data from table and each partition.	5

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Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. PERSON (driver_id,name,address) CAR (Regno,model,myear) ACCIDENT (report_number,acc_date,location) OWNS (driver-id,regno) PARTICIPATED (driver_id,regno,report_number,damage_amount) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) List out all the report numbers where the damage amount is greater than 10000. d) List out month wise count of accidents taken place. e) Display the date since the last accident took place.	10
B)	Create a procedure to accept a car regno and display car information. If the regno does not exist display an appropriate predefined exception.	10
C)	Create type address with fields- street, city, state, and pin. Create type person with fields name and address. Create table customer with fields cid, person. Insert 4 records in this ORDBMS table.	5

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PART A (25 Marks)

Q. 1 A)	Customer(cust_no(PK),cust_name) Cassette(cass_no (PK), cass_name, Language) Iss_rec(iss_no (PK), iss_date, mem_no (FK), cass_no(FK), cust_no(FK)) 1. Create the tables 2. Insert records in the table 3. List the customer numbers with their membership numbers 4. Display the cassette issued most recently 5. Add check constraint on cassette name should not be null	10
B)	Write a PL/SQL trigger upon Insert or Update on Customer that will not allow NULL value for cust_name	10
C)	Create table Purchase with Pid, book_type, pdate, amount and also create 3 partitions using range partitioning method. Consider the following partitions: partition p1 amount < 6000; partition p2 amount < 15000; partition p3 amount < 30000. Display all the partitions.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Client_Master(clientno,cname) Product_Master(prodno,description,qtyonhnd,sellprice,costprice) Sales_order(orderno,clientno,prodno,orderdate,delyaddr,orderstatus) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) List all the Product number which has been ordered by all the clients residing in the city named 'Pune'. d) Display all the orders which have been ordered on August or September. e) Drop the column delyaddr from sales_order table	10
B)	Write a PL/SQL procedure to display the product details for a given product number.	10
C)	Create table student with attributes rollNo. , name, address, DOB, mobile No. , and also three partitions based on students roll No. As roll No. < 20 ,roll No. < 40, roll No. < 60 1)Insert 5 records 2) Display data from table and each partition.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types and constraints. SHIPS (shipid, shipname, launched_date) BATTLE (battleid, battlename, battle_date) OUTCOME (shipid, battleid, result) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) List all battle names where the result is 'Won' d) Display result wise battle count of battled where the count is between 6 and 7. e) Display ship names in the descending order of launched month.	10
B)	Write a PL/SQL Trigger on Outcome table to raise an error when the result is not either 'Won' or 'Lost' before every insert or update.	10
C)	Create table student with attributes RollNo. , name, address, DOB, mobile No. , and also three partitions based on students roll No. As Roll No. < 20, roll No. < 40, roll No. < 60. Display data from table and each partition.	5

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PART A (25 Marks)

Q. 1 A)	Flights(flno(PK), source, destination, distance, departs, arrives, price, aid) Aircraft(aid(PK), aname, flightdist, eid(FK)) Employees(eid(PK), ename, salary) 1. Create the table 2. Insert records in the table 3. List the total distance covered by any aircraft 4. Create a view to list employee name and aircraft name 5. Create an index on flightdist	10
B)	Write a PL/SQL procedure to display the source and destination for the flightnumber entered by the user	10
C)	Create table Student with fields RollNo, Name, City, DOB, Subject. List Partition the Student table based on Subjects as per following. S1 = (SAD , Cprog, PEM) S2 = (MIS,DBMS, SE) S3 = (ADBT, NS, JAVA) Display the details of students who stay in the city 'Pune' from the S3 partition	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give Appropriate data types. Customers(cust_id,fname,lname,dob,doj,city,pack_id) Packages(pack_id,start_date,monthly_payment) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) Display the first name, last name, and package number for all customers whose last name is "King" d) Display all data from Customers table for all customers without a package (package number is null) e) Display the last name, package number, and birthdate for all customers whose join date is in the range between December 12th, 2007 and April 17th, 2010	10
B)	Write a pl/sql program to check weather given number is Prime or not	10
C)	a)Create table Sales(saleid.productid,price), Range partition on price where price <1000, price <2000, price <3000, price <maxvalue. b)Insert and display the values from all partitions.	5

UNIVERSITY OF MUMBAI
Practical Examination –November 2017
M.C.A Semester – III (Choice Based)
LABORATORY L301
[DBMS & Software Testing]

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Marks: 40 Marks
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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Employee (ssn, first name, last name, gender, designation, doj, address) Employee-salary (ssn, basic pay, DA, TA, pay) Department (did, dname,mgrssn) Employee-department (ssn, deptid) Employee-dependency (ssn, depname, depgender, deprelationship) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) Retrieve the names of employees who have no dependents. d) Retrieve all the information about employees working in 'Research' department including the department information. e) Display the department having employee count > 5.	10
B)	Write a PL/SQL cursor to do payroll processing with Employee-salary table.	10
C)	Create Book_type by grouping the information Bookno, Title, Author. create type student with rollno, name, course semester. Create table Book issue with Bid, book_type, dateissue,datereturn , student_type. Insert five records in Bookissue Table.	5

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PART A (25 Marks)

Q.1 A)	Client_Master(clientno(PK),cname) Product_Master(prodno(PK),description,qtyonhnd,sellprice,costprice) Sales_order(orderno(PK),clientno(FK),prodno(FK),orderdate,delyaddr,orderstatus) 1. Create tables 2. Insert records in the table. 3. Display product name having the maximum selling price. 4. Display the orderdate in the following format '13th Sep. 1997,Fri 12:34:22A.M.' 5. List the product number and description of the product whose sell price is less than the cost price.	10
B)	Write a PL/SQL BLOCK TO display all orders placed by client 4 in ascending order of order date	10
C)	Create table Account with fields AcctNo, CustName, Branch, AcctBal. List Partition the Account table based on Branch as below: B1=(Mumbai),B2=(Pune),B3=(Kolkata), B4=(Banglore),B5=(Chennai),B6=(Patna) Display records of customers having account at Mumbai Branch and Balanceis less than 5000.	5

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PART A (25 Marks)

Q.1 A)	Consider the Employee database given below. The primary keys are underlined. Give the appropriate data types. Dept_master(<u>deptno</u>,dept_name) Emp_master(<u>emp_no</u>,emp_name,emp_add,joining_date,dept_no-foreign key,salary) a) Create table Dept_master and Employee_master with specified contraints. b) Insert appropriate records in both the tables. c) Add column designation in table Employee_master. d) Perform commit and rollback. Display the appropriate result e) Write a query to create a view for those employees belongs to the finance deptartment.	10
B)	Write a block which accept one no from user and display the message whether that no is prime or not.	10
C)	a) Create the following abstract data type type_name (fname,mname,lname) type_address(street, city,pincode). Create table customer with type_name and type_address	5

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PART A (25 Marks)

Q.1	A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Party (pid, pname, leader) Constituency (cid, cname) Contestant (ctid, ctname, ctaddr) Election (ctid, cid, number of votes, pname, cname) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table. c) Display the contestant details if they secured greater than 10,000 votes. d) Find the number of contestants, constituency wise. e) Display the winner details in each constituency.	10
	B)	Write a PL/SQL function to return the number of votes secured for a given contestant name.	10
	C)	Create table Passenger with fields PID, PName, Address, Destination, Age 2. Partition the Passenger table using Hash partition.	5

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PART A (25 Marks)

Q.1 A)	PERSON (driver_id(PK),name,address) CAR (Regno(PK),model,myear,driver_id(FK)) ACCIDENT (report_number(PK),acc_date,location,Regno(FK),damage_amt) 1. Create tables 2. Insert records in the table. 3. List the maximum damage amount of any car 4. Find out all the accidents taken place in 'Ghatkopar'. 5. Person having drivers id 1234 has recently changed with his address to '103 Shivaji Lane, Mumbra'. Do the needful.	10
B)	Create a function to accept adriver id and report the sum of damage amount incurred for all accidents by the person.	10
C)	Create a table Sales with attributes salesid, location id, time id, product id, total_qty, sales_amt Hash Partitioning the table into 3 partitions on sales_amt column. Display the sales details from all the partitions.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Sailors(sid,sname,rating,age) Boats(bid,bname,color) Reserves(sid,bid,day) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation. c)Find all sailors with rating above 7 d) display first five characters of sname and find out the position of 'a'. e)Display total no of boats by color.	10
B)	Write a Procedure to display the following type of Multiplication Table as per given number. 5 * 1 = 5 5 * 2 = 10 " " = " " " = " 5 * 10 = 50	10
C)	a)CREATE TABLE sales_hash(s_productid NUMBER, s_saledate DATE,s_custid NUMBER, s_totalprice NUMBER)partition by hash on(s_productid) ,Create 4 partitions b)Insert 5 records and display data from all partitions	5

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PART A (25 Marks)

Q. 1 A)	Consider the Office database given below. The primary keys are underlined and the data types are specified: OFFICE (offid: string, city: string, region: string, mgr: string, target:number, sales: number) SALESREPS (srid: string, name: string, age: number, rep_offid: string, title: string, Hiredate: date, mgr: string, quota: number, sales: string) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation. c) Select unique regions from office table. d) Count total number of sales representatives who have joined in the month of September. e) Print the name of salesreps who has been working for less than 10 years, and whose quota is more than 400000. Print the result in ascending order of the name.	10
B)	Write a PL/SQL function to calculate the net salary of an employee with following condition.Net Salary=Basic + HR +TA, Take basic salary from user. If basic salary =12000 Then HR=30% basic and TA=12% basic IF basic salary >12000 and Basic salary<30000 then HR=40% basic and TA=20% basic IF basic salary>30000 the HR=50% basic and TA=30% basic.	10
C)	Create table inventory with 3 hash partitions on channeled. Inventory table has following fields: pid, productname, channelid, quantity Insert 6 records in it.	5

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PART A (25 Marks)

Q.1 A)	Supplier (Sno(PK), sname(not null), scity, turnover) Parts(partno(PK), weight, color, cost, selling_price) Supply_parts(Sno(FK), Partno(FK), quantity) 1) Create table 2) Insert records in the table. 3) Check the quantity should never be less than 0 4) Display part weight and quantity for all products where the color is black 5) Apply check constraint on color to allow only blue and brown	10
B)	Write a PL/SQL function to accept a part number and display the total quantity supplied.	10
C)	Create table Purchase with the attributes Pid, book_detail, pur_date and amount. Create abstract datatypeBook_type(Bookno, Title, Author) to store the book_details. Display Book number from the table.	5

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PART A (25 Marks)

Q.1 A)	STUDENT (regno(PK), name, major, bdate) COURSE (courseno(PK), cname, dept) ENROLL (regno(FK), courseno(FK), sem, marks) 1) Create table 2) Insert records in the tables. 3) List the students enrolled in MCA 4) Create a view to display the semester wise average marks 5) Create an index on major column of student table 6) Truncate enroll table	10
B)	Write a PL/SQL trigger that does not allow Null value oncourse name for any update or insert on course table	10
C)	Create table Account with fields AcctNo, CustName, Branch, AcctBal. Range Partition the Account table based on AcctBal having following range: P1 has acctbal Less than 2000 P2 has acctbal Less than 5000 P3 has acctbal Above 5000 Display the account details from the 'Delhi' branch from third partition	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Identify the primary keys, foreign keys and give appropriate data types and constraints. Shipment (Shipmentid, shippername, shipperinvoicenumber, departuredate, arrivaldate, insuredvalue) Shipment_item (shipmentid, shipmentitemid, itemid, value) Item (itemid, description, purchasedate, store, city, quantity,localcurrencyamt, exchangerate) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter at least five tuples for each relation. c) List the item details whose quantity is less than 25. d) Count the number of shipments. e) Write a query for group item purchase by city and store.	10
B)	Write a PL/SQL function that accepts a shipmentid and checks if the shipmentid exists or not. If the shipmentid exists, display a message 'Valid Client' and if not then display an appropriate error message	10
C)	1. Create the type called name with fields fname, mname, lname. 2. Create the type marks with fields M1, M2, M3. 3. Create table student with fields rollno,name,marks. 4. Insert 5 records in the table. 5. Display the rollno, name and total marks obtained by each student.	5

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PART A (25 Marks)

Q.1 A)	Student (snum(PK),sname, major, level, bdate,cname) Class (cname(PK),meet_at, room_no,fid) Faculty (fid(PK),fname,deptid) 1. Create table 2. Insert record in the table. 3. Display the class name and rooms in which the faculty 'Rachna' should go. 4. Remove the level from student table 5. List all the student sharing the same birthdate as 'Gautam'	10
B)	Write a PL/SQL procedure to accept a faculty id and display all his/her class details	10
C)	Create table employee with attributes emp_id, emp_name, department and salary. Create an abstract datatypedept_type(dno,dname) to store the department details. Display the department names of the employees.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. AUTHOR (Author-id, Name, City, Country) CATALOG (Book-id, title, author-id, Publisher, pub-date, Category, Year, Price) ORDER-DETAILS (Order-no, Book-id, ord_date, Quantity) 1) Create tables 2) Insert records in the table. 3) The price of all the books have increased by Rs.100. Do the needful. 4) List all those authors who have atleast 3 books. 5) Create a view to list author and book details.	10
B)	Create a PL/SQL procedure to display all the author detailsfor the author id entered by the user	10
C)	Create table dept with attributes did, dname, project. Create abstract datatypeproj_type with attribute project id, name, guide,topic, grade to store the project details. Display the department names along with the names of the project guides.	5

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PART A (25 Marks)

Q.1 A)	BRANCH (branch_name(PK), branch_city, assets) CUSTOMER(customer_name(PK), customer_street, customer_city) ACCOUNT(account_number(PK),customer_name(FK),branch_name(FK), balance,acc_open_date) 1).Create tables 2). Insert records in the table 3). List all customers staying in the same city as 'Ajay' 4). List branch name wise count of accounts opened. 5). Create a view to display customer name and account number of the customer residing the city of 'mumbai'	10
B)	Write a PL/SQL code to display the branch asset for the branch name entered by the user	10
C)	Create a table Library (issue_no, issue_date, book_name, authname, stud_name, semester). Partition the table into list partitioning on semester field as specified below: P1= (first) P2= (second) P3= (third) Display the contents of all the partitions	5

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PART A (25 Marks)

Q. 1 A)	Emp(eid (PK), ename, age, salary) Works(eid (FK), did (FK), pct_time) Dept(did (PK), dname, budget, managerid (FK)) 1. Create the tables 2. Insert records into the tables 3. Apply Check pct_time to allow only 'PartTime' or 'FullTime' 4. List the department in which there are minimum number of full time employee 5. Print the name of each employee whose salary exceeds the salary of 'Ganesh'	10
B)	Write a PL/SQL code to display the employee names and age using cursor	10
C)	Create table test_record(test_id,test_type,patient_name,employee_no,Lab_no,result) with list partition on lab_no as: P1=(LAB101,LAB102) P2=(LAB201,LAB204) Display the contents of each partition.	5

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- *A practical consists of two parts: Part A (**DBMS**) and Part B (**Software Testing**) where*
  1. ***Part A consists of 25 marks.***
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- ***Viva for Part A and Part B will be taken at the time of practical as well as after the practical if required.***
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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Suppliers(sid, sname, address) Parts(pid,pname,color) Catalog(sid, pid, cost) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast 5 records in a table c) Find the sids of suppliers who supply some red or green part. d) Display the total count of pid group by color e) Create view on catalog where cost greater than 2000.	10
B)	Write a PL/SQL cursor to change the color of the pid > 5 to 'steel grey'	10
C)	Create table book with fields Bookid, title, author, price, and rating. Rating would be 1, 2 and 3. Partition the table on Rating column.	5

UNIVERSITY OF MUMBAI
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LABORATORY L301
[DBMS & Software Testing]

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PART A (25 Marks)

Q. 1 A)	Student(Stud_no(PK),Stud_name,Year) Book(book_no(PK), book_name, author) Iss_rec(iss_no(PK), iss_date, Stud_no, book_no(FK)) 1. Create the table 2. Insert record in the tables 3. Check that the Year is not null 4. Apply foreign key constraint on the stud_nocolumn in the membership table 5. List the details of students who borrowed book whose author is 'Korth' or 'Ivan Bayross' 6. Rename the table Book to Book_record.	10
B)	Create a PL/SQL procedure to display the books issued for the student number entered by the user	10
C)	Create type address with fields- street, city, state, and pin. Create type person with fields name and address. Create table customer with fields cid, person. Insert 4 records in the customer table.	5

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PART A (25 Marks)

Q.1 A)	Consider the Employee database given below. The primary keys are underlined and the data types are specified: EMP (Empno: string, Ename: string, Add1:string, JoinDate: date, JoinBasic: number) SALARY (Empno: string, SalaryDate: date, EBasic: number, ECommission: number, EDeduct: number) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation. c) Retrieve all the data from SALARY table along with the name of the employee. d) Find average net salary for each employee. e) Add a constraint on Name column of EMP table to be NOT NULL.	10
B)	Write a PL/SQL procedure to display the employee details for the employee number entered by the user.	10
C)	Create the type called name with fields- fname, mname, lname. Create the type marks with fields- M1, M2, M3 Create table student with fields- rollno,name,marks. Insert 4 records in the table.	5

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PART A (25 Marks)

Q. 1 A)	employee(emp_id(PK),emp_name) department(dept_id (PK),dept_name) paydetails(emp_id ,dept_id, basic, deduction, additions, DOJ) 1. Create the tables 2. Insert records in the tables 3. List the payroll details for employee named 'Ashish' 4. Create a view which lists out the emp_name, deptid, basic, deductions, netsalary 5. Apply composite unique key on emp_id,dept_id of paydetails table	10
B)	Write a PL/SQL cursor to compute the net salary(basic+addition-deduction) along with the employee information	10
C)	Create table student with attributes roll no, name, DOB, address (as an abstract data type). Describe the structure of ADT and of table. Insert minimum 6 records into table.	5

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PART A (25 Marks)

Q.1 A)	Consider the database given below. Primary keys are identified by underline. Give appropriate data types. Sailors(sid,sname,rating,age) Boats(bid,bname,color) Reserves(sid,bid,day) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation. c)Find all sailors with rating above 7 d) display first five characters of sname and find out the position of 'a'. e)Display total no of boats by color.	10
B)	Write a pl/sql procedure to display the sailor and his boat information for the sailor id entered by the user	10
C)	Create type stud_ty with fields rollno, name. Create student table of type stud_ty. Insert 4 records into it.	5

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PART A (25 Marks)

Q. 1 A)	employee(emp_id (PK),emp_name) paydetails(emp_id,dept_name, basic, deductions, additions, DOJ) payroll(emp_id (FK), pay_date) 1. Create the tables 2. Insert records in the table. 3. Define indexondept_name column. 4. Drop primary key constraint from employee table 5. Create a view to display the emp_name and pay_date	10
B)	Write a PL/SQL code to give an increment of 20% to the basic to the employees in 'HR' department. Record the changes simultaneously in the following table Emp_Raise(emp_id,basic,sysdate)	10
C)	1. Create type address with fields street, city, state, pin. 2. Create type person with fields name and address 3. Create table customer with fields cid, person. 4. Insert 4 records in this ORDBMS table.	5