

**Gujarat Technological University MCM
Integrated MCA
Semester-II Practical Examination**

Subject Code: 4420603

Subject: Fundamental of Database Management System

Marks: 30 (max)Duration: 2.5 Hrs

Instructions:

Insert appropriate data in tables which results to meaningful retrieval.

Identify and apply key constraints.

SET 1

A.	Create the following tables.	[6]
	EMPLOYEE (empid,ename, gender, DOB, Join_date, designation) PROJECT (pid,pname, tot_duration, location) WORKS_ON (empid, pid, type_work, num_days)	
B.	Implement the following SQL Queries.	
1.	Add a constraint that project name entered must be in uppercase only.	[3]
2.	Create a sequence that can be used to enter new Employee Id. The new record should be entered using following format 'E101'.	[3]
3.	Display details of those male employees not working on project 'P105'.	[3]
4.	Create a view that displays the details of all the employees whose joining date is current date.	[3]
5.	Display total no of employees working in each project.	[3]
6.	Display the details of those projects whose total duration is more less than 5 years.	[3]
7.	Display all those employees having worked as 'manager' but not worked as 'Developer' in any project.	[3]
8.	Display details of all those employees whose age is between than 20 and 30 years.	[3]

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SET 2

A.	Create the following tables.	[6]
	EMPLOYEE(empno,name,dob,gender,salary,deptno,doj) DEPARTMENT(deptno,dname,mgr,loc)	
B.	Implement the following SQL Queries.	
1.	List out employee number, name, salary and bonus. Where bonus calculation is: if department is 10 then 20% of salary , if department is 20 then 15% else 10%	[3]
2.	List names of employs and salary who have salary more than average salary of company	[3]
3.	List out department wise manager name.	[3]
4.	List seniority wise employee details	[3]
5.	List of employees whose birthday falls in leap year	[3]
6.	List out employees whose department is not same as department of manager 101	[3]
7.	List department having no employee assigned to it	[3]
8.	Display employee details whose birth date is before 1990.	[3]

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SET 3

A.	Create the following tables.	[6]
	CUST (<u>custno</u> , custname, addln1, addln2, city, state, phone) ITEM (itemno, itemname, itemprice, qty_on_hand) INVOICE (<u>invno</u> , invDate, custno) INV_ITEM (<u>invno</u> , <u>itemno</u> , qty_used) [Combine PK invno, itemno][both are FK]	
B.	Implement the following SQL Queries.	
1.	Add a constraint that itemprice, qty_on_hand and qty_used must not be less than 1.	[3]
2.	Display the list of customers belonging to “Maharashtra” state.	[3]
3.	Display the details of items along with its quantity used.	[3]
4.	Find the items that are cheaper than item ‘Gear’.	[3]
5.	Create a table (namely gujarat_cust) for all Gujarat customer based on existing customer table.	[3]
6.	Count number of items ordered in each invoice.	[3]
7.	Display Invoice No., Customer Name and invoice dates as per the format “January 16, 2012”.	[3]
8.	Sort all items in descending order by their prices.	[3]

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SET 4

A.	Create the following tables.	[6]
	APPLICANT (<u>aid</u> , aname, addr, abirth_dt) ENTRANCE_TEST (<u>etid</u> , etname, max_score, cut_score) ETEST_CENTRE (<u>etcid</u> , location, incharge, capacity) ETEST_DETAILS (<u>aid</u> , <u>etid</u> , <u>etcid</u> , etest_dt, score) [1 st 3 fields are FK and are combine PK]	
B.	Implement the following SQL Queries.	
1.	Modify the APPLICANT table so that every applicant id has an 'A' before its value. For example, if the applicant id '1123', it should now become 'A1123'.	[3]
2.	Display the test centre details where no tests will be conducted.	[3]
3.	Display the details about applicants who have the same score as that of "Jaydev" in "Oracle Fundamentals".	[3]
4.	Display the details of applicants who have appeared for all the tests.	[3]
5.	Display those tests where no applicant has failed.	[3]
6.	Display the details about test centres where no tests have been conducted.	[3]
7.	Display the average and the maximum score, test wise of the tests conducted at Mumbai.	[3]
8.	Display the details about applicants who appeared for tests in the same month as the month in which they were born.	[3]

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SET 5

A.	Create the following tables.	[6]
	Competition (<u>Comp_code</u> , Comp_name (Dancing, Painting, GK, etc.)) Participants (<u>Part_no</u> , Part_name, DOB, Address, EmailID, Contact_number) Scorecard (<u>Part_no</u> , <u>Comp_code</u> , Judge_no [1, 2, 3], Marks)	
B.	Implement the following SQL Queries.	
1.	Add the constraint that contact number must be of exactly 10 digits	[3]
2.	Find those participants who have registered both for 'Dancing' and 'Painting' (Note: Use set operator).	[3]
3.	Find the average score, scored in each competition event.	[3]
4.	List the names of participants born in leap year.	[3]
5.	Display the competition names in descending order of its score	[3]
6.	Name the participants according to the Highscore in each competition	[3]
7.	Name the competition having maximum number of participants.	[3]
8.	Display Names of Participants in CAPITAL latter in descending order of their DOB.	[3]

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SET 6

A.	Create the following tables.	[6]
	ACCOUNT (Ac_No, Ac_Name, Ac_Type) TRANSACTION (Ac_No, Tran_Date, Tran_Type, Tran_Amt, Balance) [Ac_No FK]	
B.	Implement the following SQL Queries.	
1.	Add the constraint that Ac_Type must be 'S' or 'C' and Tran_Type must be 'D' or 'W'	[3]
2.	Find out those saving transaction that took place between 10th January 2011 and 20th January 2011.	[3]
3.	Display the Account Detail having no transaction.	[3]
4.	Display the account Name has withdrawn an amount greater than Rs. 50,000.	[3]
5.	Display the Account Detail having maximum balance.	[3]
6.	List the Accounts who have done transactions today.	[3]
7.	Display the count of each type of account	[3]
8.	Display the Account No and Name having maximum transaction entries.	[3]

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SET 7

A.	Create the following tables.	[6]
	SUPPLIER (<u>s_id</u> , s_name, contact) PARTS (<u>part_id</u> , part_name, colour, unitrate) CATALOG (<u>s_id</u> , <u>part_id</u> , qty) [1 st 2 columns are FK of respective tables]	
B.	Implement the following SQL Queries.	
1.	Find the top three parts been ordered having the highest sale till date.	[3]
2.	Find those Suppliers who charge more for some parts that the average cost of the part	[3]
3.	Add the column Contact_Person in the Supplier table with NOT NULL constraint.	[3]
4.	Display the details of all those parts that have never been supplied.	[3]
5.	Delete all those parts that have been supplied only once.	[3]
6.	List the names of Suppliers who have an 'A' and also a 'B' somewhere in their names.	[3]
7.	Count the number of items having the same colour	[3]
8.	List all Suppliers' names who supply either Part P1 or P7 or the quantity supplied is more than 100.	[3]

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SET 8

A.	Create the following tables.	[6]
	SAILOR (s_id, s_name, rating, dob) BOAT (b_id, b_name, colour) RESERVE (s_id, b_id, res_Date)	
B.	Implement the following SQL Queries.	
1.	Add the constraint that Rating must exists between 1 to 10 number	[3]
2.	List the Boat detail which are reserved in this month	[3]
3.	List the Sailor name who has reserved either 'Red' or 'Green' boat	[3]
4.	List the Sailor name who's Boat is reserved after 3 days from now.	[3]
5.	Display all the Sailors in the descending order of their rating.	[3]
6.	Find the sailor(s) whose birthday fall in a leap year.	[3]
7.	Add the column Capacity with NOT NULL constraint in the Boat table.	[3]
8.	Display the name of the Boat which is reserved maximum time.	[3]

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SET 9

A.	Create the following tables.	[6]
	MOVIE (<u>movie_id</u> , movie_name, date_release) SCREEN (<u>screen_id</u> , location, max_capacity) SHOW (<u>movie_id</u> , <u>screen_id</u> , date_arrival, date_closer) [1 st two columns are FK]	
B.	Implement the following SQL Queries.	
1.	Add the constraints that date_arrival < date_closer, location must be 'FF', 'SF', 'TF'	[3]
2.	Add Constraints that scree_id starts with S and max_capacity must be > 0.	[3]
3.	Find the top three movies which have the highest screened record.	[3]
4.	Extract the name of movie which has run the longest in the multiplex so far.	[3]
5.	Find the average duration of a movie on screen number 'S4'.	[3]
6.	Get the details of the movie that closed on date 24-December-2011.	[3]
7.	Get the full outer join of the relations screen and current.	[3]
8.	Find the date of release of a movie released in the 35 th week of 2011. [Assume that movie release on Friday only]	[3]

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SET 10

A.	Create the following tables.	[6]
	WORKER (worker_id, name, wage_per_hour, specialised_in, manager_id) JOB (job_id, type_of_job, status) JOB_ASSIGNED (worker_id, job_id, starting_date, number_of_days)	
B.	Implement the following SQL Queries.	
1.	Display how many days remain for each worker to finish his job.	[3]
2.	Change the status to 'Complete' for all those jobs, which started in year 2010.	[3]
3.	Display details of all those jobs where at least 5 workers are working.	[3]
4.	List all workers who have their wage per hour ten times greater than the wage of their managers.	[3]
5.	List the names of workers who have been assigned the job of molding.	[3]
6.	Display details of workers who are working on more than one job.	[3]
7.	Which workers receive higher than average wage per hour?	[3]
8.	Display details of workers who are specialized in the same field as that of Mr. Gupta	[3]