USN | | | | | | | | | | |

Internal Assessment Test 1 – September 2019

Sub:	Database Management Systems					Sub Code:	17CS53	Branch:	CSE	
Date:	7/9/19	Duration:	90 min's	Max Marks:	50	Sem / Sec:	A,B & C		OBE	
	Answer any FOUR FULL Questions from Q1 to Q5,Q6 is COMPULSORY.							MARKS	CO	RBT
1 (a)	With reference to database system environment, describe the component of DBMS and their interaction, with the help of a diagram.							[10]	CO1	L2
2 (a)	What is the difference between logical independence and physical data independence?							[05]	CO1	L1
(b)	What are different database schema languages and interfaces?							[05]	CO1	L1
3 (a)	Explain how the different update operations deal with constraint violations.							[05]	CO1	L2
(b)	Explain the basic constraints that can be specified in SQL as part of table creation with example.							[05]	CO1	L2
4 (a)	Consider the relations. EMPLOYEE(**emp_id**,name) ASSIGNED_TO(projectno,emp_id) PROJECT(**projectno**,project_name) Express the following queries in Relational Algebra. i)Get details of employee working on both P354 and P345 project numbers. ii)Find the employee number of employee who do not work on project P678							[04]	CO2	L3

USN | | | | | | | | | | |

Internal Assessment Test 1 – September 2019

Sub:	Database Management Systems					Sub Code:	17CS53	Branch:	CSE	
Date:	7/9/19	Duration:	90 min's	Max Marks:	50	Sem / Sec:	A,B & C		OBE	
	Answer any FOUR FULL Questions from Q1 to Q5,Q6 is COMPULSORY.							MARKS	CO	RBT
1 (a)	With reference to database system environment ,describe the component of DBMS and their interaction, with the help of a diagram.							[10]	CO1	L2
2 (a)	What is the difference between logical independence and physical data independence?							[05]	CO1	L1
(b)	What are different database schema languages and interfaces ?							[05]	CO1	L1
3 (a)	Explain how the different update operations deal with constraint violations.							[05]	CO1	L2
(b)	Explain the basic constraints that can be specified in SQL as part of table creation with example.							[05]	CO1	L2
4 (a)	Consider the relations . EMPLOYEE(**emp_id**,name) ASSIGNED_TO(projectno,emp_id) PROJECT(**projectno**,project_name) Express the following queries in Relational Algebra. i)Get details of employee working on both P354 and P345 project numbers. ii)Find the employee number of employee who do not work on project P678							[04]	CO2	L3

	Answer any FOUR FULL Questions from Q1 to Q5,Q6 is COMPULSORY.	MARKS	CO	RBT
(b)	Explain create, insert, delete and update, drop, alter statements in SQL with example.	[06]	CO3	L2
5	EMPLOYEE(Name,**Ssn**,Bdate,Address,Sex,Salary,Supervisor_ssn,Dno) DEPARTMENT(Dname,**Dnumber**,Mgr_ssn,Mgr_start_date) DEPT_LOCATION(**Dnumber,Dlocation**) PROJECT(Pname,**Pnumber**,Plocation,Dnum) WORKS_ON(**Essn,Pno**,Hours) DEPENDENT(Essn,Dependent_name,sex,Bdate,Relationship) Note: Attribute 'Dependent_name' is a partial key.	[04]	CO1	L3
(a)	Draw an ER diagram for the above "COMPANY" database.			
(b)	Draw schema diagram for above database	[02]	CO2	L3
(c)	(i)Write an SQL query to find the details of employees who do not work on project P3 ii) Write an SQL query to list the employee names whose name contains the letter 'b'	[04]	CO3	L3
6	For the Company database given in question number 5 ,Write SQL query for the following.			
(a)	List female employees from DNo =20 earning more than 50000.	[02]	CO3	L3
(b)	Retrieve the names and ssn of employees who have no dependents	[02]	CO3	L3
(c)	Each project on which more than 2 employees work, retrieve the project number ,project name and number of employees who work on the project.	[02]	CO3	L3
(d)	For each dept,retrieve the dept number,number of employees in dept,and their average salary.	[02]	CO3	L3
(e)	For each dept that has more than five employees,retrieve the dept number and the number of employees who are making more than $40000.	[02]	CO3	L3

	Answer any FOUR FULL Questions from Q1 to Q5,Q6 is COMPULSORY.	MARKS	CO	RBT
(b)	Explain create, insert, delete and update, drop, alter statements in SQL with example.	[06]	CO3	L2
5	EMPLOYEE(Name,**Ssn**,Bdate,Address,Sex,Salary,Supervisor_ssn,Dno) DEPARTMENT(Dname,**Dnumber**,Mgr_ssn,Mgr_start_date) DEPT_LOCATION(**Dnumber,Dlocation**) PROJECT(Pname,**Pnumber**,Plocation,Dnum) WORKS_ON(**Essn,Pno**,Hours) DEPENDENT(Essn,Dependent_name,sex,Bdate,Relationship) Note: Attribute 'Dependent_name' is a partial key.	[04]	CO1	L3
(a)	Draw an ER diagram for the above "COMPANY"database.			
(b)	Draw schema diagram for above database.	[02]	CO2	L3
(c)	(i)Write an SQL query to find the details of employees who do not work on project P3 ii) Write an SQL query to list the employee names whose name contains the letter 'b'	[04]	CO3	L3
6	For the Company database given in question number 5,Write SQL query for the following.			
(a)	List female employees from DNo =20 earning more than 50000.	[02]	CO3	L3
(b)	Retrieve the names and ssn of employees who have no dependents	[02]	CO3	L3
(c)	Each project on which more than 2 employees work, retrieve the project number ,project name and number of employees who work on the project.	[02]	CO3	L3
(d)	For each dept,retrieve the dept number,number of employees in dept,and their average salary.	[02]	CO3	L3
(e)	For each dept that has more than five employees,retrieve the dept number and the number of employees who are making more than $40000.	[02]	CO3	L3