CIE: Internal Assessment Details

Internal Assessment Question Paper – 2
M.S. Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)
Department of Computer Science and Engineering

Programme: B.E

Subject: Database Systems

Credits: 3:1:0

Sem: 5

CIE: Test 2 –Retest

Subject Code: CS52

Date: 03/02/22

Sec: A, B, C

Term: Oct 2021 – Feb 2022

Max Marks: 30

Time: 9.30 – 10.30

Portions for Test: (L17-L30)

Instructions to Candidates:
1. Answer any two questions.
2. Each Question carries 15M.
3. Mobiles, smart watches or any electronic gadgets are strictly banned.

Sl#		Question	Marks	Bloom's Level	CO Mapping
1	a.	Define view. List and explain the two ways of updating views.	5	L2	CO3
	b.	Consider the following Relations Emp_det (Empid ,Fullname, Managerid, Date_of_join) Emp_sal (Empid, ProjectName, Salary) Write SQL queries for the above relations 1. Write a SQL query to fetch the count of employees working in project 'P1'. 2. Fetch project-wise count of employees sorted by project's count in descending order. 3. Write a SQL query to fetch employee names having salary greater than or equal to 5000 and less than or equal 10000.	6	L3	CO3

	c.	Check whether the given relation R (A, B, C, D, E, I) with functional dependencies {A→C, AB→C, C → DI, CD→I, EC → AB, EI→C} is in 2NF. State the definition of 2NF.	4	L3	CO4
2	a.	Explain any 2 informal design guidelines for relation schema.	4	L2	CO4
	b.	Consider the following Relations Employee(SSn, Fname, Lname, Address, SSSN, Sal, Dno) Department(Dno, Dname, DmgrSSn) Dependent(Essn, Fname, Lname, Gender, Relationship) 1. List the names of employees who have no dependents 2. Retrieve all employee names whose address is in Basaveshwarnagar Bangalore 3. For each department whose average salary is more than 30000, retrieve the department name and the number of employees working in that department	6	L3	CO3
	c	Check whether the given relation R (A, B, C, D, E) with functional dependencies F= {AE→BC, B→AD, E→CD, A→E} is in 3NF. If not decompose R into 3NF.	5	L3	CO4
3	a.	Differentiate between Having and Where clause.	5	L3	CO3

	b.	Sailors(sid: integer, sname: string, rating: integer, age: real);
		Boats(bid: integer, bname: string, color: string);
		Reserves (sid: integer, bid: integer, day: date).
		Write SQL Queries for the following
		  i. Find the name and the age of the youngest sailor.
		  ii. Find the average age of sailors for each rating level.
		  iii. Find the names of sailors who have reserved a red boat, and list in the order of age.
			6	L3	CO3

	c.	State the Referential integrity constraint and illustrate the use of ON DELETE CASCADE.	4	L3	CO4

Course Outcomes meant to be assessed by the IA Test 2:

CO3: Formulate using SQL, solutions to a broad range of query and data update problems (PO2, PO3, PO4, PO5, PSO2)

CO4: Apply Normalization to improve database design (PO1, PO2, and PSO2)