Guru Nanak Dev Engineering College, Ludhiana				
Department of Information Technology				
Program		B.Tech.	Semester	6
Subject Code		PCIT-104	Subject Title	Database Management System
(MST) No.		1	Course Coordinator	Mohanjit Kaur Kang
Max. Marks		24	Time Duration	1hr 30 mins
Date of MST	15 feb 2024		Roll Number	

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	Define integrity constraints.	CO1, L1	2
Q2	Analyze primary and candidate with appropriate example.	CO1, L4	2
Q3	Identify the schemas in DBMS along with at least four differences between external, logical and physical level schemas. Also explain architecture of DBMS.	CO1, L2,L3	4
Q4	Discuss CODD rule in brief for DBMS.	CO1, L3	4
Q5	Elaborate how Entity Relationship diagram can be effectively applied in DBMS. Draw E-R diagram for online shopping system.	CO2, L4	4
Q6	A) Evaluate Relational Algebra. Consider the following relational database schema consisting of the four relation schemas: passenger (pid, pname, pgender, pcity) agency (aid, aname, acity) flight (fid, fdate, time, src, dest) booking (pid, aid, fid, fdate) Answer the following questions using relational algebra queries: a) Get the complete details of all flights to New Delhi. b) Get the details about all flights from Chennai to New Delhi. c) Find only the flight numbers for passenger with pid 123 for flights to Chennai before 06/11/2020. d) Find the passenger names for passengers who have bookings on at least one flight. B) Analyze and evaluate the four Applications of Spatial and Multimedia Databases.	CO2, L4	8

Course Outcomes (CO)
Students will be able to

1	Apply knowledge of database system, No Sql database, data mining and SQL structure.
2	Identify, formulate database design, Functional dependencies and recovery techniques
3	Use the techniques, skills and tools such as query handling, normalized relations
4	Design Physical and object relational database.
5	Investigate various case studies using NoSql.
6	Apply the Applications of spatial and multimedia databases for real world.

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Create