26.05.2023 (E)

SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: January 2023 –May 2023 Maximum Marks: 100 Examination: ESE Examination Duration:3 Hrs.		
Programme code: 01 Programme: B.Tech (Computer Engineering)	Class: SY	Semester:IV(SVU 2020)
Name of the Constituent College: K. J. Somaiya College of Engineering	Name of the department: COMP	
Course Code: 116U01C403	Name of the Course: Relational Database Management Systems	
Instructions: 1)Draw neat diagrams 2) All questions are compulsory 3) Assume suitable data wherever necessary		

Que. No.	Question	Max. Marks
Q1	Solve any **Four**	**20**
i)	Write the characteristics of DBMS.	5
ii)	Compare ER and EER model	5
iii)	Explain the use of views in SQL	5
iv)	Why do we need hashing?	5
v)	What are the objectives of Normalization?	5
vi)	What are the ACID properties in DBMS?	5

Que. No.	Question	Max. Marks
Q2 A	Solve the following	**10**
i)	Explain the different types of users who play different role in DBMS.	5
ii)	Compare File system and DBMS.	5
	OR	
Q2 A	Explain types of data model.	10
Q 2 B	Solve any **One**	**10**
i)	What is relational algebra? Explain the basics operations in relational algebra.	10
ii)	Write the differences between DDL and DML commands.	10

Que. No.	Question	Max. Marks
Q3	Solve any **Two**	**20**
i)	Explain query processing in DBMS.	10
ii)	Explain types of hashing techniques.	10
iii)	Explain triggers in SQL	10

Que. No.	Question	Max. Marks
Q4	Solve any **Two**	20
i)	What is Functional Dependency? Explain types of functional dependencies.	10
ii)	How does Concurrency control work in DBMS.	10
iii)	Explain recovery techniques in DBMS.	10

Que. No.	Question	Max. Marks
Q5	(Write notes / Short question type) on any**four**	20
i)	Steps in data modelling.	5
ii)	Security and Authorization in SQL.	5
iii)	Types of Constraints in DBMS	5
iv)	Deadlock handling.	5
v)	Differences between Ordered Indexing and Hashing.	5
vi)	Query Optimization	5