B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023
Fourth Semester
Computer Science and Engineering
(Common to Third Semester - Computer Science and Engineering (AIML) & Artificial Intelligence and Data science)
20CSPC402 - DATABASE MANAGEMENT SYSTEMS
(Regulations 2020)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks, K-Level, CO
1.	Define primary key with example.	*2,K1,CO1*
2.	What is a data dictionary?	*2,K1,CO1*
3.	Define Functional Dependency.	*2,K1,CO2*
4.	Define weak and strong entity sets.	*2,K1,CO2*
5.	Define starvation.	*2,K1,CO3*
6.	What is the need for concurrency?	*2,K1,CO3*
7.	What is a query compiler?	*2,K1,CO4*
8.	Define ordered Indices.	*2,K1,CO4*
9.	What is indexing and What are the different kinds of indexing?	*2,K1,CO5*
10.	Define RAID.	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	Explain in detail about data models with neat diagram.	*13,K2,CO1*
		OR	
	b)	Discuss about Enhanced ER model with example.	*13,K2,CO1*
12.	a)	Explain briefly about keys and its types with suitable examples.	*13,K2,CO2*
		OR	
	b)	What is a normal form? Explain the types of normal forms with relevant examples.	*13,K2,CO2*
13.	a)	When does a deadlock occur? Outline the concept of two-phase commit protocol with example.	*13,K2,CO3*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12496**

OR

    b)   Explain the types of serializability with example.   *13,K2,CO3*

14. a)   Discuss about query processing overview.   *13,K2,CO4*

OR

    b)   Explain how to optimize the query processing using heuristics.   *13,K2,CO4*

15. a)   Explain the various hashing techniques.   *13,K2,CO5*

OR

    b)   Describe indexing and the different kinds of indexing.   *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a)   Explain in detail about DTD.   *15,K2,CO6*

OR

    b)   Explain in detail about the distributed database architecture.   *15,K2,CO6*