Code No.: IT403PC

R20   H.T.No. [ ][ ][8][R][ ][ ][ ][ ]

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–II–Semester End Examinations (Supply) - February- 2024
DATABASE MANAGEMENT SYSTEMS
(Common to CSM, IT, AI&DS)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A   (20 Marks)

1. a)	What is entity?	[2M]
b)	Define Data Definition Language?	[2M]
c)	What is altering table?	[2M]
d)	Define SELECT operation in Relational algebra?	[2M]
e)	Write basic SQL query.	[2M]
f)	Define Third Normal Form?	[2M]
g)	What is Recoverability?	[2M]
h)	List the properties of transaction?	[2M]
i)	What is an index?	[2M]
j)	Discuss about primary indexes?	[2M]

PART-B   (50 Marks)

2.	State and explain various features of E-R Models.	[10M]
	OR	
3.	Explain about Structure of a DBMS.	[10M]
4.	Explain about Logical database design.	[10M]
	OR	
5.	Discuss about Tuple Relational Calculus In detail.	[10M]
6.	Define trigger and explain its three parts? Compare row level and statement level triggers.	[10M]
	OR	
7.	Explain BCNF. What are the steps to be followed to convert a relation in 3NF to BCNF?	[10M]
8.	Explain in detail about Serializability.	[10M]
	OR	
9.	Explain in detail about Timestamp-Based Protocols.	[10M]
10.	Explain about Hash based Indexing and Tree based Indexing.	[10M]
	OR	
11.	Explain deletion and search operation in B+ trees.	[10M]

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