Course Code: 23ES3T05

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)
II-B.Tech I-Semester Regular Examinations (BR23), November -2024
DATABASE MANAGEMENT SYSTEMS (CSE -AI & DS)

Time: 3 hours   Max. Marks: 70

Question Paper consists of Part-A and Part-B
Answer ALL the question in Part-A and Part-B

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	Define the terms data and information?	(2M)	CO1	BL3
b)	What is data Abstraction? Give the levels of data abstraction?	(2M)	CO1	BL1
-c)	Explain about Tuple relational calculus?	(2M)	CO2	BL4
d)	Explain the use of NULL values	(2M)	CO2	BL3
e)	Define Join? Explain different types of joins	(2M)	CO3	BL1
f)	Discuss about trigger?	(2M)	CO3	BL6
g)	Discuss normalization?	(2M)	CO4	BL6
h)	Illustrate fully functional dependency with example?	(2M)	CO4	BL2
i)	Explain briefly about ACID properties of a database transaction	(2M)	CO5	BL5
j)	Discuss cascade less schedules?	(2M)	CO5	BL6

PART–B (5X10 = 50M)

2a.	Describe the architecture of DBMS?	5(M)	CO1	BL3
b.	Distinguish strong entity set with weak entity set? Draw an ER diagram to illustrate Weak entity set?	5(M)	CO1	BL2
(OR)				
3a.	Compare and Contrast file Systems with database system?	5(M)	CO1	BL5
b.	Design ER Diagram using Specialization & Generalization	5(M)	CO1	BL6

4a.	Illustrate different operations in Relational algebra with an example?	5(M)	CO2	BL2
b.	Explain about different types of integrity constraints with example?	5(M)	CO2	BL4
(OR)				
5a.	Discuss about DDL,DML and DQL with example queries?	5(M)	CO2	BL5
b.	Explain the use of domain and foreign key constraint with examples?	5(M)	CO2	BL2

6a.	Illustrate Group by and having clause with examples	5(M)	CO3	BL2
b.	Explain in detail about views	5(M)	CO3	BL2
(OR)				
7a.	Discuss different types of aggregate operators with examples in SQL?	5(M)	CO3	BL6
b.	Discuss how each of the following constructs is used in SQL, and discuss the various options for each construct. Specify what each construct is useful for	5(M)	CO3	BL2

	i. Nested queries. ii. Outer joins. iii. Triggers			

8a.	Discuss insertion,deletion and modification anomalies. Why they considered bad?	5(M)	CO4	BL3
b.	Define Boyce-Codd normal form. How does it differ from 3NF?	5(M)	CO4	BL3
	(OR)			
9a.	Describe properties of decompositions	5(M)	CO4	BL6
b.	Discuss about functional dependencies. How are related to FD's?	5(M)	CO4	BL3

10a	Discuss two phase locking and strict two phase locking protocols?	5(M)	CO5	BL6
b.	Compare and contrast Extendible hashing With Linear hashing	5(M)	CO5	BL4
	(OR)			
11a	Discuss UNDO and REDO operations and recovery techniques that use each	5(M)	CO5	BL5
b.	Describe how the insert and delete operations are performed in B+ tree?	5(M)	CO5	BL6

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