Course Code: 24BC3T08

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

II - BCA I-Semester Regular Examinations (BR24), Jan/Feb - 2026

DATABASE MANAGEMENT SYSTEMS (BCA)

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 Database Management System.	(2M)	CO1	BL1
b)	State any two advantages of specialty DBMS.	(2M)	CO1	BL2
c)	Define data abstraction.	(2M)	CO2	BL1
d)	What is an entity set?	(2M)	CO2	BL1
e)	Define primary key.	(2M)	CO3	BL1
f)	What is enforcing integrity constraint?	(2M)	CO3	BL1
g)	What is a view in SQL?	(2M)	CO4	BL1
h)	Define trigger.	(2M)	CO4	BL1
i)	What is functional dependency?	(2M)	CO5	BL1
j)	Define normalization.	(2M)	CO5	BL1

PART–B (5X10 = 50M)

2a.	Describe the architecture of DBMS and state the function of each component.	(5M)	CO1	BL2
b.	Summarize the advantages of DBMS over file processing system.	(5M)	CO1	BL2
	(OR)			
3a.	Identify different database users and explain their roles.	(5M)	CO1	BL2
b.	Discuss data independence and its significance in DBMS.	(5M)	CO1	BL2
4a.	Describe the components of ER model with suitable examples.	(5M)	CO2	BL2
b.	Illustrate different types of attributes in ER modeling.	(5M)	CO2	BL2
	(OR)			
5	Construct an ER diagram for a library management system and Justify the design choices made in the ER diagram.	(10M)	CO2	BL3
6a.	Describe relational model concepts and integrity constraints.	(5M)	CO3	BL2
b.	Differentiate between primary key, candidate key, and foreign key.	(5M)	CO3	BL4
	(OR)			
7a.	Write an SQL query using **SELECT and WHERE** clauses to retrieve students of a given department, and briefly explain the query.	(5M)	CO3	BL3
b.	Write an SQL query using an appropriate **JOIN** to display student names along with enrolled courses, and briefly explain the JOIN used.	(5M)	CO3	BL3

8a.	Describe triggers and explain their execution timing.	(5M)	CO4	BL2
b.	State the advantages of using triggers in databases.	(5M)	CO4	BL1
	(OR)			
9a.	Describe views in SQL and explain their creation syntax.	(5M)	CO4	BL2
b.	Explain the advantages and limitations of views.	(5M)	CO4	BL2
10a	Describe normalization and explain First Normal Form and Second Normal Form.	(5M)	CO5	BL2
b.	Explain Third Normal Form with a suitable example.	(5M)	CO5	BL2
	(OR)			
11a	Define functional dependencies and explain their types.	(5M)	CO5	BL2
b.	Explain anomalies and the need for schema decomposition.	(5M)	CO5	BL2

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