

**BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)**

II - BCA I-Semester Supplementary Examinations (BR24), May - 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) What is the purpose of a Database System?	(2M)	CO1	BL1
b) Mention "View of Data" in DBMS?	(2M)	CO1	BL1
c) What is an Attribute?	(2M)	CO2	BL1
d) Write about Relationship in ER diagram?	(2M)	CO2	BL2
e) List any two features of the Relational Model.	(2M)	CO3	BL1
f) Write the SQL syntax to ALTER a table by adding a new column.	(2M)	CO3	BL2
g) Differentiate between UNION and INTERSECT (any two points).	(2M)	CO4	BL1
h) How are NULL values handled in SQL conditions?	(2M)	CO4	BL2
i) Define Functional Dependency with an example.	(2M)	CO5	BL1
j) State any two properties of decomposition in DBMS.	(2M)	CO5	BL1

PART-B (5X10 = 50M)

2. Explain the purpose of database systems and describe different database system applications with examples.	10(M)	CO1	BL2
(OR)			
3. Discuss the view of data in DBMS. Explain the three levels of data abstraction and data independence.	10(M)	CO1	BL2
(OR)			
4. Explain Database Design process and draw an ER diagram for a Library Management System (or any suitable system).	10(M)	CO2	BL2
(OR)			
5. Explain additional features of ER model and Extended ER (EER) features such as specialization, generalization, and aggregation with examples.	10(M)	CO2	BL5
(OR)			
6. Explain the Relational Model in detail. Discuss its features and advantages with suitable examples.	10(M)	CO3	BL2
(OR)			
7. What is a View? Explain the creation, uses, and advantages of views.	10(M)	CO3	BL2
(OR)			
8. Demonstrate the use of WHERE, GROUP BY, and HAVING clauses.	10(M)	CO4	BL2
(OR)			
9. Explain how procedures, functions, and exception handling are used in SQL with examples.	10(M)	CO4	BL2

- 10 Discuss how functional dependencies help in database design with suitable examples. 10(M) CO5 BL1

(OR)

- 11 Normalize the given relation step-by-step up to 3NF/BCNF by identifying keys and functional dependencies. 10(M) CO5 BL3
