

Seat No.:	Q. Paper Code: FTC-A-007			SET	A	
	Fabtech Technical Campus, College of Engineering & Research, Sangola					
	(An Autonomous Institute)					
	Computer Science and Engineering					
	Academic Year: -2025-26, Semester-I					
Advanced Database System (25PCS11172)						
Regular End Semester Examination Winter 2025-26 [Dec. / Jan.]						
Class:	F. Y. M. Tech.	Day & Date:	Saturday 03/01/2026			
Duration:	03 Hrs.	Max. Marks:	60 Marks			
Time:	11:00 AM TO 02:00 PM					
Instructions:						
1) All Questions are compulsory. 2) Figures to the right indicate full marks. 3) Draw neat diagram wherever necessary. 4) Make suitable assumptions if necessary and state it clearly. 5) Use of non-programmable calculator is allowed.						
Q. No.	Questions			Marks	CO	BL
Q. 1	Attempt any two of the following			12		
1	Explain the concept of integrity constraints in relational databases. Describe the need and importance of enforcing integrity constraints over relations.			6	1	2
2	Explain the Entity Relationship diagram with example.			6	1	2
3	Create a view for an EMPLOYEE table that hides salary information and explain its use.			6	1	3
Q. 2	Attempt any two of the following			12		
1	Compare the RDBMS and OODBMS.			6	2	2
2	Explain the concept of a parallel database system. Describe its objectives and advantages over centralized database systems.			6	2	2
3	Explain the concept of parallel query optimization in parallel databases. Discuss why query optimization is more complex in a parallel database environment.			6	2	3
Q. 3	Attempt any two of the following			12		
1	Compare various data fragmentation techniques in distributed database.			6	3	2
2	A distributed database stores STUDENT and TEACHER relations at different locations. Apply referential integrity constraints to maintain consistency when insert, update, and delete operations are performed across sites.			6	3	3
3	Compare distributed database vs centralized database. Comments on its performance.			6	3	3

Q. 4	Attempt any two of the following	12		
1	Explain the various components of XML with examples.	6	4	2
2	Explain the general structure of WSDL.	6	4	2
3	Given an XML file of students (RollNo, Name, Dept, CGPA), apply DOM parsing to read the XML and display only students with CGPA ≥ 8.0 . Write the steps / algorithm and required method calls.	6	4	3
Q. 5	Attempt any two of the following	12		
1	Explain the suitable techniques to improve the performance of image and video retrieval in multimedia database.	6	5	2
2	Explain the spatial database along with its types, features and properties.	6	5	2
3	Explain mobile database in details.	6	5	2

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