18 JUL 2023

Reg. No.												

Question Paper Code	12030

M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023

First Semester

M.E. - Computer Science and Engineering

20PCSPC102 - ADVANCED DATABASES

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Define parallel database systems. Give some examples for parallel databases.	*2,K1,CO1*
2.	Define ACID in transaction processing.	*2,K1,CO1*
3.	What are active rules in Database?	*2,K1,CO2*
4.	Differentiate fact table and dimension table.	*2,K2,CO2*
5.	List the uses of XML Schema.	*2,K1,CO3*
6.	Mention the use of Web databases.	*2,K1,CO3*
7.	What do you mean by mobility?	*2,K1,CO4*
8.	Define Location dependent Data.	*2,K1,CO4*
9.	List the content of MDBMS.	*2,K1,CO5*
10.	What are three types of multidimensional schemas?	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Compare and Contrast the following in Distributed databases: (i) Fragmentation and Replication (ii) Horizontal and Vertical Partitioning	 *6,K2,CO1* *7,K2,CO1*
		OR	
	b)	(i) Explain with neat diagram, the different architectures of Parallel databases. (ii) Explain the key properties which are used to measure parallel Database performance.	*8,K2,CO1* *5,K2,CO1*
12.	a)	Discuss about Temporal Database and TSQL2.	*13,K2,CO2*
		OR	

b) What is Deductive database? Explain with an example, how the deductive database system can make deductions based on rules and facts stored in databases. *13,K2,CO2*

13. a) Illustrate a XML tree structure for storing the book details, author details and student details of a library. *13,K3,CO2*

OR

b) (i) Interpret the approaches for storing XML Documents. *7,K3,CO3*
(ii) Illustrate about the extraction of XML Documents. *6,K3,CO3*

14. a) Explain how the location and Handoff management can be performed in mobile databases. *13,K2,CO4*

OR

b) Discuss about concurrency control in mobile databases with suitable diagrams. *13,K2,CO4*

15. a) Illustrate in detail about the design and architecture of Multimedia Database and its issues. *13,K3,CO5*

OR

b) Summarize the techniques involved in Audio Databases and explain each one of them. *13,K3,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Interpret with an example the image acquisition techniques and storage techniques. *15,K3,CO6*

OR

b) Illustrate about the document database NoSQL with appropriate examples. *15,K3,CO6*