Reg. No.															

Question Paper Code	13655

M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2025

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.	What are the differences between client server and centralized database system architectures?	2	K1	CO1
2.	Differentiate Local transaction and Global transaction.	2	K2	CO1
3.	List the components of Deductive database.	2	K1	CO2
4.	Compare fact table and dimension table.	2	K2	CO2
5.	List the goal of XML database.	2	K1	CO3
6.	What is meant by well formed XML document?	2	K1	CO3
7.	State the properties of mobile database.	2	K1	CO4
8.	Define intermittent connectivity.	2	K1	CO4
9.	Define Multidimensional data.	2	K1	CO5
10.	Which DB is best for storing videos?	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a) (i)	Interpret the various locking protocols used in a distributed system.	9	K2	CO1
	(ii)	Discuss the advantages of Single lock manager and Distributed lock Manager.	4	K2	CO1
		OR			
	b)	Explain parallel databases with inter and intra query parallelism.	13	K2	CO1
12.	a)	Examine about the various Spatial data types, relationships and access methods in detail.	13	K4	CO2
		OR			
	b)	What is a Temporal Database? Analyze with an example, how the commands insert, delete and update are implemented in a temporal database of your choice.	13	K4	CO2
13.	a)	Illustrate about XML Querying with suitable examples.	13	K2	CO3
		OR			

b) (i) Explain in detail about the Native XML Databases. *6 K2 CO3*

(ii) Describe about Web Databases. *7 K2 CO3*

14. a) Explain in detail on concurrency control in mobile database. *13 K2 CO4*

OR

b) Discuss the various data management issues in Mobile Database and explain it with an example. *13 K2 CO4*

15. a) Interpret in detail about the design and architecture of Multimedia Database and its issues. *13 K2 CO5*

OR

b) Summarize about the video databases with neat diagram. *13 K2 CO5*

PART - C (1× 15 = 15 Marks)

16. a) In a hospital, there are five special patients. Each one has a specific disease. That's why they are distributed in separate rooms because they all have different backgrounds. Each has a specific ethnicity, blood type and age. It is found that: *15 K3 CO6*

1- Tony is African.
2- Paul has blood type O-.
3- The Aussie patient is 50 years old.
4- Amy is 42 years old.
5- The Aussie's room is on the right of the European one.
6- The Tuberculosis patient has blood type AB.
7- The Asian patient is Asthmatic.
8- The 19 years old patient's room is in the middle.
9- John is in the first room on the left.
10- The Amnesic patient's room is beside of the patient with blood type. A.
11- The Asthmatic patient's room is beside of the patient with blood type B.
12- The Obese patient is 31 years old.
13- Mary has diabetes.
14- John's room is beside the latino patient.

Represent the above dataset in table format and also specify the same information utilizing Datalog and SQL.

OR

b) Identify the various image acquisition techniques, storage techniques and explain them with an example. *15 K3 CO6*