

Reg. No.

Question Paper Code 21339

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

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

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. Differentiate client server and centralized database system architectures. | <i>2, K2, CO1</i> |
| 2. What are the advantages of parallelism? | <i>2, K1, CO1</i> |
| 3. What is meant by a recursive query? | <i>2, K1, CO2</i> |
| 4. List the components of Deductive databases. | <i>2, K2, CO2</i> |
| 5. Define DTD. | <i>2, K1, CO3</i> |
| 6. Differentiate XPath and XQuery. | <i>2, K2, CO3</i> |
| 7. Identify the challenges in Mobility Data Management. | <i>2, K1, CO4</i> |
| 8. Define intermittent connectivity. | <i>2, K1, CO4</i> |
| 9. Define Multidimensional data. | <i>2, K1, CO5</i> |
| 10. Which database is best for storing videos? | <i>2, K1, CO5</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain how the transactions are handled in distributed database. *13, K2, CO1*
- OR**
- b) Explain parallel databases with inter and intra query parallelism. *13, K2, CO1*
12. a) Discuss about the syntax and semantics in Starburst, Oracle and DB2 with suitable example. *13, K2, CO2*
- OR**
- b) Explain about the various Spatial data types, relationships and access methods in detail. *13, K2, CO2*
13. a) Explain a sample XML DTD file and generalize the concepts of elements and their nested structure. *13, K2, CO2*

OR

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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- b) Discuss about the following: 6,K2,CO3
(i) Native XML Databases 7,K2,CO3
(ii) Web Databases

14. a) Explain about the transaction commit protocol in mobile database system. 13,K2,CO4

OR

- b) (i) Discuss in detail about the design and implementation issues of mobile databases. 6,K2,CO4
(ii) Distinguish location dependent and location independent query with an example. 7,K2,CO4

15. a) Illustrate the use of various multidimensional data structures with neat diagram. 13,K3,CO5

OR

- b) Interpret how querying the content of video libraries is done with an example. 13,K3,CO5

PART - C (1 × 15 = 15 Marks)

16. a) (i) Interpret the relationships between document databases and other databases. Elaborate on the use cases of the DocumentDB. 8,K3,CO6
(ii) Write about the strengths and weaknesses of document databases. 7,K3,CO6

OR

- b) Illustrate how to store and retrieve images from a MySQL database using PHP. 15,K3,CO6