B.E. (Computer Technology) Seventh Semester (C.B.S.)
Elective - I : Advanced Database Systems

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Explain any two Architectures of Distributed Database management system with the help of proper diagram. **6**

b) Write short notes on following:- **8**
i) Concurrency control in distributed databases.
ii) Distributed transaction.
iii) Distributed data storage.

OR

2. a) Explain 2-phase commit protocol in detail, comment what are the different problem may possible with 2-phase commit protocol and how it is overcome by 3-phase commit protocol. **7**

b) Write short note on following. **7**
i) Light weight Directory Access protocol.
ii) Distributed Query processing.
iii) Homogeneous and Heterogeneous Databases.

3. a) Explain different Architectures of parallel Databases with the help of proper diagram. **8**

b) Explain Inter-query parallelism, comment how it is different than Intra – query parallelism. **5**

OR

4. a) Write in detail parallel query evaluation and explain it with the help of proper example. **7**

b) Explain about speedup and Scaleup in parallel database system with the help of diagram. **6**

5. a) Explain in detail persistent programming languages. **7**

b) Explain complex data type, comment the significance of it in object oriented Database. **6**

OR

6.	a)	Write in brief object oriented Vs object relational Database system.	**5**
	b)	Write short note on following:- i) Inheritance in SQL. ii) Structure types in SQL. iii) Multiset types in SQL.	**8**
7.	a)	Write in detail about XML and comment how it is different than HTML.	**6**
	b)	Write short notes on following:- i) Structure of XML data. ii) Document type definition. iii) XML Document schema.	**7**

OR

8.	a)	Explain querying and transformation in XML with proper example.	**6**
	b)	Write short note on following:- i) XML data storage. ii) XPATH. iii) XQUERY,	**7**
9.	a)	Explain the Architecture of Data warehouse with the help of proper diagram.	**8**
	b)	What is Data pre-processing, explain its significance in data warehouse.	**6**

OR

10.	a)	Explain each of OLAP operation on data cubes with proper example.	**8**
	b)	Write short notes on following. i) Multidimensional data model. ii) Snowflake schema and its advantages.	**6**
11.	a)	Explain statistical database auditing with the help of proper example.	**6**
	b)	Explain each type of security threats with proper example.	**7**

OR

12.	a)	Explain in detail Granting and Revoking of privileges with proper example.	**8**
	b)	Write short notes on following:- i) Implicit locking. ii) Explicit locking.	**5**

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