

Seat No.	
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Winter Examination Oct/Nov 2023

Subject Name: B.Tech. CBCS_67543_83858_83993 - Advanced Database Systems_05.12.2023_10.30 AM To 01.00 PM

Subject Code: 83858

Day and Date: - Tuesday, 05-12-2023

Total Marks: 70

Time: - 10:30 am to 01:00 pm

Instructions.:

- 1) All questions are compulsory
- 2) Figures to the right indicate full marks

- Q.1. Choose the correct option. (2 Marks each) [14]**
- i) Which of the following parallel database architecture is mainly used by distributed database system?
- A) Shared Memory
 - B) Shared Disk
 - C) Shared Nothing
 - D) Hierarchical
- ii) _____ is a popular, open-source, sorted ordered column-family store that is modeled on the ideas proposed by Google's Bigtable.
- A) HBase
 - B) Hypertable
 - C) Clouddata
 - D) None of the above
- iii)
- The data stored in the database can be queried using.....
- A. XML
 - B.XQuery
 - C.Table
 - D.Records
- iv) What kind of database MongoDB is?
- A) Graph Oriented
 - B) Document Oriented
 - C) Key Value Pair
 - D) Column Based
- v) Which of the following is the preferred way to recover a database after a transaction in progress terminates abnormally?
- A) Rollback
 - B) Rollforward
 - C) Switch to duplicate database
 - D) Reprocess transactions
- vi) If we parallelize the execution of large number of small transactions in a database system, then which of the following would be improved?
- A) Response time
 - B) Rotational latency
 - C) Throughput
 - D) All of the above
- vii) Which of the following applied on warehouse?
- A) write only
 - B) read only
 - C) both a & b
 - D) none of these

- Q.2. Solve any 2 of the following (7 Marks Each) [14]**
- a) What is parallel database system? Explain data partitioning techniques used in parallel databases.**
 - b) How CRUD operation perform in MongoDB. Explain step by step with example.**
 - c) Describe MongoDB. Explain following various commands of MongoDB with syntax and example. A. Use B. Insert() C. Find() D. Save()**
- Q.3. Solve any 2 of the following (7 Marks Each) [14]**
- a) What is Dynamic SQL? State its advantage and disadvantages.**
 - b) Explain parallel architectures.**
 - c) What is CouchDB? Give difference between MongoDB and CouchDB.**
- Q.4. Solve any 2 of the following (7 Marks Each) [14]**
- a) How to maintain security for Database Administration?**
 - b) How the Data Warehouses is useful for Data Analysis ?**
 - c) Enlist and explain Different Mathematical models for decision making**
- Q.5. Solve any 2 of the following (7 Marks Each) [14]**
- a) Describe DBA activities with suitable diagram.**
 - b) Explain Online Analytical Processing ?**
 - c) Explain in details data mining process.**