

No. of Printed Pages : 4

Sl. No.

B2.3-R5 : ADVANCED DATABASE TECHNOLOGIES

DURATION : 03 Hours

MAXIMUM MARKS : 100

Roll No. :

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Answer Sheet No. :

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Name of Candidate : _____ ; **Signature of Candidate :** _____

INSTRUCTIONS FOR CANDIDATES :

- Carefully read the instructions given on Question Paper, Answer Sheet.
- Question Paper is in English language. Candidate has to answer in English Language only.
- Question paper contains Seven questions. The Question No. 1 is compulsory. Attempt any FOUR Questions from Question No. 2 to 7.
- Parts of the same question should be answered together and in the same sequence.
- Questions are to be answered in the ANSWER SHEET only, supplied with the Question Paper.
- Candidate cannot leave the examination hall/ room without signing on the attendance sheet and handing over his/her Answer Sheet to the Invigilator. Failing in doing so, will amount to disqualification of Candidate in this Module/Paper.
- After receiving the instruction to open the booklet and before answering the questions, the candidate should ensure that the Question Booklet is complete in all respects.

DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.

1. (a) What is ACID property ?
 (b) Define Relationship and Relationship set.
 (c) Write the purpose of trigger.
 (d) Define Dynamic SQL.
 (e) What is redundancy ? Explain with example.
 (f) What do you mean by Transaction in database ? List out the properties of transaction.
 (g) How does RAID works ? (7x4)

2. (a) Elaborate the term Distributed Deadlock. Discuss the methods of deadlock detection with suitable examples.
 (b) How object definition language is different from object query language ? (10+8)

3. (a) Explain about multidimensional and parallel database with an example.
 (b) Illustrate indexing and hashing techniques with suitable examples. (9+9)

4. (a) Explain data warehouse architecture.
 (b) Illustrate different set operations in Relational algebra with an example.
 (c) Draw an ER diagram for Student Management System. (6+4+8)

5. (a) What is Concurrency Control? How is it implemented in DBMS? Illustrate with a suitable example.
 (b) Distinguish between fixed length records and variable length records.
 (c) When are election algorithm used in distributed databases ? (6+6+6)

6. (a) Discuss the issues of network transparency.
 (b) What are the properties of OID ?
 (c) State the difference between security and integrity ? (5+6+7)

7. Write a Short Note on following :
 (a) KD Tree
 (b) Durability in database
 (c) SQL/NoSQL (6+6+6)

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SPACE FOR ROUGH WORK

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