

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - IV Computer Science & Engineering : WINTER : 2023
SUBJECT : ITC-II: DATABASE SYSTEMS

Day : Friday

Time : 02:30 PM-05:30 PM

Date : 24-11-2023

W-25585-2023

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

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- Q.1 Explain Data independence and view of data explain in details? (10)
- OR**
- Q.1 Define DBMS list the advantages of DBMS & Database application explain? (10)
- Q.2 What is relational algebra & state about SELECT operation, Project operation in Relational algebra? (10)
- OR**
- Q.2 Explain about tuple relational calculus and domain relational calculus in details? (10)
- Q.3 Define functional dependency? Why are some functional dependencies trivial? (10)
- OR**
- Q.3 What is Normalization and explain first Normal form and second Normal form? (10)
- Q.4 What are the views and it's types explain in detail? (10)
- OR**
- Q.4 Discuss Data Definition language and Data manipulation language commands in SQL? (10)
- Q.5 What do you mean by time stamping protocols for concurrency control? Discuss multiversion scheme of concurrency control also? (10)
- OR**
- Q.5 What is transaction state? Explain ACID properties of transaction? (10)
- Q.6 Explain in detail about spatial and multimedia databases? (10)
- OR**
- Q.6 Explain in detail massive Database and Hadoop? (10)

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