

BACHELOR OF TECHNOLOGY (CBCS) (2020 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-24307-2023

Max. Marks : 60

N.B.

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

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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