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(21218)

BCA-V Sem.

Roll No. ....

18021

B. C. A. Examination, Dec. 2018

Introduction to DBMS

(BCA-501)

(New)

Time : Three Hours] [Maximum Marks : 75

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required.

3×5=15

1. Define super keys, candidate keys and primary keys.

2. Explain the term – data independence.

3. What is hashing ? Explain.

4. What do you mean by relational database ? Describe.

5. Briefly explain the terms – security and authorization.

Section-B

(Short Answer Questions)

Attempt any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required. 7½×2=15

6. What is a referential integrity constraint ? Why do we need it ? Explain with the help of suitable example.

7. List four significant differences between a file-processing system and a DBMS.

8. Explain third normal form with example.

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Section-C

(Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. Explain the different locking techniques with example for concurrency control.

10. Explain indexed sequential, B tree and B+ tree file organization with example.

11. Explain super class, inheritance and generalization with example.

12. Write short notes on the following :

    (i) Strong and weak entity

    (ii) Different levels of data abstraction

    (iii) Database recovery techniques.

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13. A hospital maintains data about the following entities :

    (i) PATIENTS (SSNo, LastName, FirstName, HomePhone, Sex, DateofBirth, Age, Street, City, State, Zip)

    (ii) DOCTORS (SSNo, LastName, FirstName, OfficePhone, Pager, Specialty)

    (iii) BEDS (RoomNumber, BedNumber, Type, Status, PricePerHour)

    (iv) ACCOUNTS (DateIn, DateOut, Amount)

    Construct an E-R diagram for the hospital management; specify keys, mapping cardinalities, participation constraints (if necessary).

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