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17/26-C

BCA (Fourth Semester)
Examination, 2017

Paper : BCA-402

Data Base Management System

Time : Three Hours]   *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section - A

Note : Attempt **all** parts of this question. Give answer of each part in about 50 words.

$1\frac{1}{2} \times 10 = 15$

1. (i) What do you mean by database system architecture?

    (ii). Write the definition of database schema and database instances.

    (iii) Write the notation used for E-R diagram.

    (iv) Explain the concept of generalization with example.

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    (v) Explain entity and attributes.

    (vi) What do you mean by constraints?

    (vii) Write a SQL Command to make a table named 'student' with column name "Roll. No., Name, City and date of birth".

    (viii) Write the definition of Query and sub Query.

    (ix) What do you mean by functional dependency?

    (x) Explain about BCNF.

Section - B

Note : Attempt **all** questions. Give the answer of each question in about 200 words. $8 \times 5 = 40$

2. Write four advantages of Database system over file system.

OR

Briefly explain about data definition language and data manipulation language.

3. What do you mean by mapping constraints? Explain each with suitable diagram.

OR

Design an E-R diagram for banking system using two entities as "bank" and "customer" related with "Loan" relation. Each entity and relation must contain at least three attributes.

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4. Define operations used in relational algebra. Also explain the types of join operation.

OR

What do you mean by referential integrity? Explain with an example.

5. Write at least five advantages of SQL. Also explain SQL data types and literals.

OR

What do you mean by union compatibility? Explain union operation with an example.

6. Write the definition of normalization and its importance with Database Management System. https://www.vbspustudy.com

OR

What do you mean by internet database. Write about geographical databases.

Section - C

Note : Attempt any **two** questions. Give answer of each question in about 500 words.

$10 \times 2 = 20$

7. Draw the structure of overall Database Management system. Explain each part of structure in brief.

8. What is extended E-R model? Explain in brief with an example.

9. Consider the following relations : Bank (Branch-Code, Name, Pin) Customer (Cus-id, Cus-name, ac-No) Loan (Loan-id, Cus-id, brnach-code, amount).

Write the following queries :

(i) List all customers detail who has loan less than "5000 Rs" and belongs to branch "Jaunpur".

(ii) List all customers who has loan from branch-code "06006".

10. Write short note on following :

(i) Aggregate functions.

(ii) Intersection and Minus

11. Explain in brief about data mining and Data Warehousing.