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B.A./B.Sc./B.Com. Part-II (Fourth Semester) Examination, 2023

Computer Applications

Code : CA411T

(Database Management System)

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

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

Section-A

(Very Short Answer Type Questions)

Note : Attempt **all** parts of this question. Give the answer of each part in about 50 words. 2×10=20

1. (a) List the advantages of DBMS.

   (b) Define instrances and schemas of database.

   (c) Define Null values

   (d) Define redundancy

   (e) Give the levels of data abstraction.

   (f) Epxlain degree of relationship.

   (g) Define the term data dictionary.

   (h) Explain select query in SQL.

   (i) What is the use of DISTINCT keyword in SQL?

   (j) Define functional dependency.

Section-B

(Short Answer Type Questions)

Note : Attempt any **five** questions. Give answer of each question in about 200 words. 7×5=35

2. Compare and contrast file systems with database system.

3. Explain the difference between a weak and a strong entity set.

4. Draw the overall structure of DBMS and explain its various components.

5. Explain the terms aggregation and generalization.

6. What is normalization? Differentiate between first normal form and second normal form.

7. Discuss in detail the operators SELECT, PROJECT, UNION with suitable example.

8. Explain about different types of integrity constraints.

9. Explain the aggregate functions supported by SQL.

Section-C

(Long Answer Type Questions)

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

10×2=20

10. Describe about data models and explain E-R model.

11. Discuss on the various ways in which we can arrive at a good database design.

12. Define join. Explain different types of joins.

13. Explain the distinction among the terms primary key, candidate key and super key.