GS-637

II Semester B.C.A. Examination, May/June - 2019

COMPUTER SCIENCE

BCA 204 : Database Management System

(CBCS) (Fresh+Repeaters) (2014-15 & Onwards)

Time : 3 Hours   Max. Marks :70

Instruction : *Answer all sections.*

SECTION - A

Answer **any ten** of the following. Each question carries **two** marks.   **10x2=20**

1. Define Database.

2. What is a data Model ? Name any two types of data model.

3. What is an attribute ? Name any two types of attributes.

4. What do you mean by Cardinality ratio ?

5. What is double buffering ?

6. Define the term Block and Blocking factor.

7. What are database anomalies ? Mention its any two types.

8. What is functional dependency ?

9. What is distributed database ?

10. What is meant by Query ?

11. What is a Cursor ? Mention the types.

12. What are the different statements of DML ?

P.T.O.

SECTION - B

Answer **any five** of the following. Each question carries **ten** Marks.   **5x10=50**

13. (a) Explain the DBMS Interfaces.   5
    (b) Explain the three Schema architecture of DBMS.   5

14. (a) Explain the phases of database design with a neat diagram.   5
    (b) Explain the different notations used in ER- diagram.   5

15. (a) Explain Relationship and types of Relationships in DBMS.   5
    (b) Explain the different Integrity rules in Relational Model with example.   5

16. (a) What is hashing ? Mention its advantages and disadvantages.   5
    (b) Explain spanned and unspanned records.   5

17. (a) What is Normalisation ? Explain First and Second normal forms.   5
    (b) Explain the types of keys in Relational database model.   5

18. (a) What is JOIN operation in SQL ? Mention the different type of JOIN.   5
    (b) Explain SELECTION and PROJECTION operations with syntax and example.   5

19. (a) Consider the following relation   5
        EMPSALARY(EMPNO, EMPNAME, DOB, DEPTNAME, SALARY)
        Write SQL query statement for the following :
        (i) Display the number of employees working in each department
        (ii) Find the sum of Salaries of all employees.
        (iii) Find Sum and Average salaries of employees of BCA department.
        (iv) Find the highest salary that an employee draws.
        (v) Find the least salary that an employee draws.
    (b) What is a database trigger ? Explain any four types of triggers.   5

20. (a) What is a transaction ? Explain its Properties.   5
    (b) Explain the Concurrency Control with Time Stamping.   5

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