(b) Write SQL query for following consider table (5)

EMP (empno, deptno, ename, salary, Designation, joiningdate, DOB, city)

  (i) Display employees name and number in an increasing order of salary

  (ii) Display employee name and employee number dept wise

  (iii) Display total salary of all employee

  (iv) Display number of employees dept. wise

  (v) Display employee name having experience more than 3 years

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[This question paper contains 4 printed pages.]

Your Roll No...............

Sr. No. of Question Paper : 1024   F

Unique Paper Code   : 6202451201

Name of the Paper   : Database Management Systems

Name of the Course   : **B. Voc.**

Semester   : II

Duration : 2 Hours   Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.

2. **Attempt total 4 questions. Q1 is compulsory to attend. Rest, Attempt any 3 questions more**
                                        (15×4=60)

1. (a) Describe 4 integrity constraints in DBMS.   (4)

    (b) List SQL grouping functions with examples. (5)

    (c) Define the two levels of data independence. (2)

P.T.O.

(d) Define the term ACID properties.   (4)

2. (a) Differentiate between (Any two):   (5×2=10)

   (l) Centralized and Client-Server Architectures

   (2) File system and Database System

   (3) DELETE, TRUNCATE and DROP statements in SQL

   (4) DDL and DML

   (b) Explain about Selection, Projection, Rename, Division and Cartesian product operations in relational algebra?   (5)

3. (a) What is an ER Model? Write about different types of attributes in ER model. Show the notation of each.   (10)

   (b) Draw ER diagram for Library Management System.   (5)

4. (a) What is a normal form? Explain about various normal forms with examples.   (10)

   (b) Define and explain generalization and aggregation.   (5)

5. (a) What is minimal cover / irreducible set of functional dependencies? Determine the closer of the following set of functional dependencies for a relation scheme $R(A, B, C, D, E, F, G, H)$, $F = \{AB \rightarrow C, BD \rightarrow EF, AD \rightarrow G, A \rightarrow H\}$ List the candidate keys of R.   (10)

   (b) Define functional dependency? Why are some functional dependencies trivial?   (5)

6. (a) SHORT NOTES ON the following (any 4):   (2.5×4=10)

   (l) Weal entity

   (2) Cardinality ratio

   (3) Derived attributes

   (4) Generalization and specialization

   (5) Different types of keys in DBMS

   (6) DDL COMMANDS