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| **Name:**  **Enrolment No:** | | A picture containing text, clipart  Description automatically generated | | |
| UPESEnd Semester Examination (DR), October 2025Programme Name: BCA Semester:Course Name : Databases Time : 1.5 hrsCourse Code : CSEG1037/ CSEG2058 Max. Marks: 50Nos. of page(s) : 1 Calculator allowed: YesInstructions: Please attempt according to the time provided and given weightage. | | | | |
| **SECTION A**  **Attempt all questions** | | | | |
| **S. No.** |  | | **Marks** | **CO** |
| Q 1 | List and briefly describe four different categories of database users | | **5** | **C01** |
| Q 2 | Explain the terms Generalization and Specialization with suitable examples from database design. | | **5** | **C01** |
| Q 3 | Mention any four aggregate functions in SQL along with their syntax and usage. | | **5** | **CO2** |
| **SECTION B** | | | | |
| Q 4 | Discuss the conditions a relation must satisfy to be in Second Normal Form (2NF). | | **10** | **CO3** |
| Q 5 | a) Describe the key responsibilities of a Database Administrator (DBA).  **OR**  b) Explain how normalization helps in maintaining data integrity. | | **10** | **CO3** |
| **SECTION C** | | | | |
| Q 6 | a) Given the following database schema:  Suppliers(sid: integer, sname: string, address: string)  Parts(pid: integer, pname: string, color: string)  Catalog(sid: integer, pid: integer, cost: real)   Write relational algebra queries to:  (i) Retrieve the sids of suppliers who supply any red part **or** are located at "221 Packer Ave".  (ii) Retrieve the sids of suppliers who supply both red and green parts.  **OR**  b) Consider the table EMP(empno, deptno, ename, salary, designation, joining\_date, dob, city).  Write SQL queries to:  (i) Display employee names and numbers in ascending order of salary.  (ii) List employees who joined before the year 2020. | | **15** | **CO4** |