



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

| InSem Examination-II Summer2025 | |
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| Exam Seat No.: | |
| Academic Year:2024-2025 | Semester:IV |
| Class:SY | Program:B.Tech |
| Branch Code:ADS | Pattern:2023 |
| Name of Course:Database Management System | Course Code:2311212 |
| Max. Marks:30 | Duration:1.15 Hrs. |

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 2 pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

- 1 a) What are the advantages of DBMS over a file processing system? (4) CO1
- 1 b) Explain the concept of Integrity Constraints in an RDBMS. (3) CO1

Explain different types of integrity constraints.

Question No. 2

- 2 a) Define DDL, DML, DCL, and TCL in SQL. (4) CO1
- Explain the purpose of each with examples.
- 2 b) What is the purpose of Relational Algebra in SQL? Briefly explain its operations. (4) CO1

Group OR

- 2 c) Describe the structure of a DBMS with its components. (4) CO1
- 2 d) What is a SQL SELECT query? (4) CO1

Discuss its common clauses and their functions.

Question No. 3

- 3 a) Explain Set operators in SQL with examples. (4) CO2
- 3 b) What are views? (3) CO2

Account(Accno, Bname, Balance)

Depositor(Cno,Accno)

- i) Create a view of all depositors details

ii) Write a SQL query of depositors using above view having balance less than 50000

Question No. 4

4 a) Consider the following database:

(4) CO2

Employee(empname, street, city)

Works(empname, companyname, salary)

Company(companyname, city)

Manages(empname, managername)

Solve following questions using SQL statements

1) Find the names of all employees who work for "Bajaj"

2) Find all employees who live in the same city as that in which the company for which they work is located.

3) Find all employees who do not work for XYZ.

4) Find all employees who earn more than every employee of "Bajaj".

4 b) What are aggregate functions in SQL? List and explain some commonly used aggregate functions with examples.

(4) CO2

Group OR

4 c) What is the difference between a Procedure and a Function in PL/SQL? Explain with examples.

(4) CO2

4 d) Explain the concept of an Index in SQL. Discuss its types and how it helps in query optimization

(4) CO2

..... End of question paper.....