



B.K. BIRLA CENTRE FOR EDUCATION

**SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL**



MID-APRIL EXAMINATION 2025 INFORMATION TECHNOLOGY (802)

Class : XII A/B/C (SUBJECT-04)

Date : 16-04-2025

Admission No.:

Duration: 1 Hrs

Max. Marks : 25

Roll No.:

General Instructions:

Try to attempt all questions as per given order.

All questions are compulsory.

The Question Paper is divided into Three sections Section A to C.

- Section A has 10 questions attempt only 9 and carry 1 mark each.
- Section B has 8 questions attempt only 5 and carry 2 marks each.
- Section C has 4 questions attempt only 2 and carry 3 marks each.

Section-A

1. Which constraint is used when it is mandatory for a column to have a value? 1
A. Data type constraint B. Check constraint
C. not null constant D. default constraint
2. Which user interacts with end user to understand the requirement and then create the specifications accordingly? 1
A. Database administrator B. Application programmers
C. End user D. System Analyst
3. Who brought the concept of relational database? 1
A. E.F. Codd B. Charles Babbage
C. Mark Henry D. None of these
4. Which key is a set of one or more columns that can be used to uniquely identify rows within a table? 1
A. Primary Key B. Unique Key
C. Foreign Key D. Super Key
5. The number of attributes in a relation is called its _____. 1
A. Degree B. Domain C. Cardinality D. Attribute
6. What is the purpose of the ALTER TABLE command? 1
A. To add or remove a database
B. To modify the structure of an existing table
C. To delete an existing table
D. To create a new table

7. What does the COUNT() function do in MySQL? 1
 - A. Returns the sum of numeric values
 - B. Returns the number of rows that match a condition
 - C. Returns the maximum value in a column
 - D. Returns the minimum value in a column
8. What will happen if you try to insert a NULL value into a column defined as a PRIMARY KEY? 1
 - A. The NULL value will be accepted
 - B. An error will occur
 - C. The NULL value will be replaced by zero
 - D. The table will be deleted
9. Which of the following is NOT an aggregate function? 1
 - A. SUM()
 - B. AVG()
 - C. MAX()
 - D. UPDATE()
10. How do you add a PRIMARY KEY constraint to an existing table? 1
 - A. ALTER TABLE table_name ADD PRIMARY KEY (column_name);
 - B. MODIFY TABLE table_name SET PRIMARY KEY (column_name);
 - C. UPDATE TABLE table_name ADD PRIMARY KEY (column_name);
 - D. SET PRIMARY KEY ON table_name (column_name);

Section - B

11. What is Data? 2
12. What are the advantages of using a database? 2
13. What is a Relational Database? 2
14. Give an example to explain Referential Integrity. 2
15. What is the purpose of the CHECK constraint in SQL? 2
16. Write an SQL query to increase the salary in the Emp table for the employee with EmployeeID 101 by 5000. 2
17. Write an SQL query to create a table named Employees with the following columns: 2
 - EmployeeID (Integer, Primary Key)
 - Name (Varchar, 100)
 - Department (Varchar, 50)
 - Salary (Decimal, 10,2)
18. Suggest the datatype for the following columns of salary table to be created: 2
 - Emp_ID, Name, Basic_Sal, Date_of_Join

Section – C

19. Write three points why databases are better than traditional file system? 3
20. Define : a. Primary key b. Foreign key 3

21. Write the Sql Query:

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Given Table: **employees**

emp_id	name	department	salary	join_date	email
101	Alice Smith	HR	50000	2020-05-10	alice@example.com
102	Bob Johnson	IT	70000	2019-08-15	bob@example.com
103	Charlie Lee	Finance	60000	2021-02-20	charlie@example.com
104	David Brown	IT	80000	2018-11-30	david@example.com

a. Write an SQL query to add a new column `bonus INT` to the `employees` table.

b. Insert a new employee with the following details:

emp_id: 105

name: Emma Davis

department: Marketing

salary: 55000

join_date: 2022-09-10

email: emma@example.com

c. Write an SQL query to **increase the salary** of all employees in the **IT department** by **10%**

22. Write a short note:

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a. COUNT() b. AVG () c. MAX()