



# B.K. BIRLA CENTRE FOR EDUCATION

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



## PERIODIC TEST I 2026-27

### I.T – SET – 1 (QUESTION PAPER)

Class : XII

Date :

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 7 and carry 1 mark each.
- Section B has 7 questions attempt 6 and carry 2 marks each.
- Section C has 4 questions attempt 2 and carry 3 marks each.

#### SECTION – A

#### **Q1. Choose the correct answer from the given options**

*(7x1 = 7 Marks)*

- Which of the following is NOT considered an advantage of implementing a Database Management System (DBMS)?
  - It reduces data redundancy.
  - It inherently possesses a high implementation cost.
  - It facilitates centralised data storage.
  - It supports concurrent multi-user access.
- Regarding the fundamental mathematical properties of a relational database, which of the following statements concerning tuples (rows) is accurate?
  - Tuples must strictly follow alphabetical ordering.
  - No two tuples can be entirely identical within a single relation.
  - Duplicate tuples are permissible if foreign keys are omitted.
  - Tuples define the data types for the relation's attributes.
- In SQL, the VARCHAR(n) data type is specifically engineered to store a string of up to n characters possessing which of the following characteristics?
  - Fixed length
  - Boolean length
  - Infinite length
  - Variable length

- IV. Which Data Definition Language (DDL) command is exclusively utilized to alter the structural schema of an existing database table?
- UPDATE
  - MODIFY
  - ALTER TABLE
  - CHANGE
- V. Which SQL aggregate function is executed to return the highest numerical or alphabetical value from a specified column?
- MIN( )
  - MAX( )
  - SUM( )
  - COUNT( )
- VI. Which of the following constraints is strictly enforced upon a Primary Key column within a relational table?
- It is permitted to contain multiple NULL values.
  - It must contain strictly unique values and absolutely cannot be NULL.
  - It permits duplicate values strictly for archived records.
  - It automatically restricts external table referencing.
- VII. In English grammar capitalization rules, the acronym M.I.N.T.S. stands for Months, the pronoun 'I', Names, Start of Sentences, and which of the following?
- Titles
  - Trademarks
  - Timezones
  - Typologies
- VIII. Within the standard communication cycle, which of the following best describes the function of "Feedback"?
- It is an entirely optional component utilized exclusively in formal business contexts.
  - It acts as environmental noise that disrupts the primary transmission.
  - It is the original medium through which the sender's message is transmitted.
  - It is a crucial component demonstrating that the message was successfully received and comprehended.
- IX. Which SQL statement is explicitly employed to modify existing records or data within a specific table?
- ALTER
  - MODIFY
  - UPDATE
  - CHANGE

- X. Which SQL option automatically deletes child records when the corresponding parent record is deleted?
- a) ON DELETE RESTRICT
  - b) ON DELETE CASCADE
  - c) ON DELETE SET NULL
  - d) ON DELETE NO ACTION

### **SECTION – B:**

#### **Short Answer Questions**

*(2x6 =12 Marks)*

- Q2.** What is Data? How is it different from Information? Give one example each.
- Q3.** What is a Primary Key? State two rules that a Primary Key must follow.
- Q4.** What is a Foreign Key? How does it help in maintaining Referential Integrity?
- Q5.** What is the purpose of the NOT NULL constraint in SQL? Write the syntax to apply it to a column 'age' of data type INTEGER.
- Q6.** What are aggregate functions in SQL? Name and briefly describe any three aggregate functions.
- Q7.** Define 'Active Listening'. State any two non-verbal cues that show you are actively listening to a speaker.
- Q8.** What does the acronym RESPECT stand for in the context of Active Listening? (Write all 7 full forms.)

### **SECTION – C:**

#### **Long Answer Questions**

*(3x2 =6 Marks)*

- Q9.** What is a Database Management System (DBMS)? List and briefly explain any three operations that can be performed on a database using a DBMS.
- Q10.** Define the following Relational Model Key Constraints and state one key rule for each:  
(a) Primary Key  
(b) Candidate Key  
(c) Super Key.
- Q11.** Explain the concept of a 'Self-Referencing Table'. Design a text-based schema for a SCHOOL\_COMMITTEE table that represents a hierarchy of teachers, clearly indicating the Primary Key (PK) and Foreign Key (FK).
- Q12.** Refer to the Library table below and write SQL queries for the following tasks:

Table:

Bid	Name	Author	Price
B01	Wings of Fire	APJ Abdul Kalam	550
B02	The Monk Who Sold His Ferrari	Robin Sharma	340
B03	You Can Win	Shiv Khera	230

- Retrieve Name and Price of all books with Price greater than 300.
- Update the price of the book with Bid 'B03' to 280.
- Display all books sorted by Price in descending order.

**\*\*\*\*\* END OF QUESTION PAPER – SET 1 – ALL THE BEST \*\*\*\*\***