



B.K. BIRLA CENTRE FOR EDUCATION

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



TERM 1 EXAMINATION (2025-26) INFORMATION TECHNOLOGY (802)

Class: XII (SUBJECT-5)

Date: 05-09-2025

Admission No. :

Time : 3 hrs.

Max Marks: 60

Roll No. :

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of 22 questions in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. All questions of a particular section must be attempted in the correct order.
5. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
6. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 17 questions.
 - ii. A candidate has to do 11 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

ANSWER KEY

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.(1) Answer any 4 out of the given 6 questions on Employability Skills.

(4 x 1 = 4)

- (i) The is a face to face meeting and discussion between two or more people for a specific purpose.
- | | |
|---------------|-------------------|
| (a) Interview | (b) Message |
| (c) Object | (d) None of these |
- (ii) Self management is also called
- | | |
|------------------|-------------------|
| (a) Self control | (b) Personality |
| (c) Stress | (d) None of these |
- (iii) Mona is helping her sister to overcome a personality disorder. What should she do ?
- | | |
|-------------------------------|---------------------------|
| (a) Talk to her sister | (b) Engage her in hobbies |
| (c) Help her build confidence | (d) All of these |
- (iv) The intersection point between a row and column is called
- | | |
|-----------|------------|
| (a) Row | (b) Column |
| (c) Table | (d) Cell |
- (v) What kind of software are Adobe Spark and Keynote ?
- | | |
|-------------------|------------------|
| (a) Documentation | (b) Presentation |
| (c) Spreadsheet | (d) DBMS |

- (vi) An individual who initiates, creates and manages a new business can be called
- (a) A leader (b) A manager
(c) **An entrepreneur** (d) A professional

Q.(2) Answer any 3 questions out of the given 4 questions on Introduction to database Concepts.

(3 x 1 = 3)

- (i) What is one of the advantages of using a tabular format for storing data in a database ?
(a) **It allows easy storage, retrieval and data manipulation.**
(b) It increases data complexity.
(c) It makes data extraction difficult.
(d) It prevents interaction with applications.
- (ii) Why are databases crucial for modern information systems ?
(a) They allow data to be disorganized and unstructured
(b) They enable easy data retrieval with the help of complex query languages
(c) **They ensure data consistency, provide security and allow for data backup**
(d) They are primarily used for reporting and analytics, not data storage
- (iii) The number of attributes in a relation is called its
(a) **Degree** (b) Attribute
(c) Cardinality (d) Domain
- (iv) What role does SQL play in a database system ?
(a) Ensures data uniqueness and consistency
(b) Provides security for data in transit
(c) **Enables easy data retrieval and querying**
(d) Allows data backup and recovery

Q.(3) Answer any 6 questions out of the given 7 questions on Working with SQL.

(6 x 1 = 6)

- (i) What SQL command is used to display a list of all databases in a database management system ?
(a) Display Databases; (b) List databases;
(c) Show databases; (d) View Databases;
- (ii) What is the initial step in setting up a database system ?
(a) Executing the Create database command (b) **Designing the database schema**
(c) Populating the database with data (d) Configuring database permissions
- (iii) Which SQL command is used to display the tables within a specific database ?
(a) Show Database_Name; (b) Display Database_Name;
(c) **Show Tables from Database_Name;** (d) List tables Database_Name;
- (iv) command displays list of databases available in the current server.
(a) **Show Databases** (b) Show tables
(c) Create tables (d) Display tables
- (v) Which language is used to manage data in a database ?
(a) Java (b) HTML
(c) **SQL** (d) C++
- (vi) What is the purpose of the SELECT statement ?
(a) To update data in a table (b) To delete data from a table
(c) To insert data into a table (d) **To retrieve data from a table**
- (vii) What command means “display all columns” ?
(a) SHOW COLUMNS (b) DISPLAY COLUMNS
(c) LIST COLUMNS (d) **SELECT ***

Q.(4) Answer any 7 questions out of the given 9 questions on Operating Web based Applications.

(7 x 1 = 7)

- (i) In which phase of the web application creation is design of the application created ?
 (a) Requirement Definition (b) Implementation
 (c) **Design** (d) Testing
- (ii) What does the R in IRCTC stand for ?
 (a) Robot (b) Rover (c) **Railway** (d) Rebel
- (iii) NICNET – A national satellite based computer network in India was launched in the year :
 (a) 1986 (b) **1987** (c) 1990 (d) 1992
- (iv) Unit, integration and user acceptance are all forms of :
 (a) Frontend development (b) Backend development
 (c) Integration (d) **Testing**
- (v) What kind of online courses does Khan Academy provide ?
 (a) **Free** (b) Paid
 (c) Mobile Wallets (d) Internet banking
- (vi) The first step in online shopping is to :
 (a) **Visit the websites** (b) Open your smartphone
 (c) Use your debit card (d) None of these
- (vii) Credit card bills as well as Internet and cable bills can be paid :
 (a) Online (b) Offline
 (c) **Both (a) and (b)** (d) None of these
- (viii) Reviews
- (ix) Reservation

Q.(5) Answer any 10 questions out of the given 12 questions on Java Programming with Net beans. (10 x 1 = 10)

- (i) Graphical User Interface
- (ii) Retrieve
- (iii) Which operator is used to perform addition in Java ?
 (a) + (b) -
 (c) * (d) /
- (iv) What will be the value of x after the following code :

```
int x = 5;
x += 3;
```

 (a) **8** (b) 5 (c) 3 (d) 15
- (v) What is the result of the expression 8%3 in Java ?
 (a) **2** (b) 3 (c) 2.67 (d) 2.0
- (vi) Which operator is used to increment a variable by 1 in Java ?
 (a) ++ (b) -- (c) += (d) *=
- (vii) In Java, what is the purpose of the “if” statement ?
 (a) To declare a variable
 (b) To repeat a block of code until a condition is met
 (c) **To execute a block of code conditionally based on a Boolean expression**
 (d) To perform arithmetic operations
- (viii) What happens if the condition specified in an “if” statement evaluates to false ?
 (a) The program terminates
 (b) **The code block associated with the “if” statement is skipped**
 (c) The code block associated with the “if” statement is executed
 (d) An exception is thrown
- (ix) In java, why is it necessary to initialize variables before usage ?
 (a) To ensure that the variable holds a specific value throughout its lifecycle.
 (b) To prevent memory leaks in the program

- (c) To allow the compiler to allocate the appropriate amount of memory for the variable
- (d) To optimize the performance of the program by reducing memory consumption
- (x) Which logical operator in Java evaluates to True if either of the operands is true ?
 (a) && (b) || (c) ! (d) %
- (xi) Which part of a “for” loop in Java is optional ?
 (a) Initialization (b) Condition
 (c) Increment/Decrement (d) All parts are optional
- (xii) Which of the following statements is used to terminate a “for” loop prematurely in Java ?
 (a) Continue (b) Exit (c) Break (d) Return

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 4 questions on Employability Skills

(3 x 2 = 6)

Q. (6) Define the following : (a) Active Listening (b) Interview

(a) Active Listening

Active listening is the skill of fully focusing on, understanding, and responding thoughtfully to what someone is saying. It involves paying attention to both verbal and non-verbal cues, avoiding interruptions, and giving feedback to show you are engaged in the conversation.

(b) Interview

An interview is a formal meeting or conversation between two or more people, where one person (the interviewer) asks questions to gather information, assess skills, or evaluate suitability for a job, admission, or other purposes, and the other person (the interviewee) responds.

Q. (7) Define self motivation. Why is self motivation important ?

Self-motivation is the ability to drive yourself to take action and achieve goals without needing external encouragement or pressure. It comes from an internal desire to improve, learn, or succeed.

Importance of Self-Motivation:

1. **Helps Achieve Goals:** It pushes you to work consistently towards your personal or professional goals.
2. **Builds Confidence:** Self-motivated people believe in their abilities and take initiative.
3. **Improves Performance:** It encourages focus, discipline, and productivity.
4. **Overcomes Challenges:** Helps in staying positive and determined even when facing difficulties.
5. **Promotes Growth:** Leads to continuous learning and self-improvement.

Q. (8) What is a function in Calc ? Explain the following Calc functions with the help of examples :

- (a) Count() (b) MAX()

In LibreOffice Calc, a function is a predefined formula that performs a specific calculation using given values (arguments). Functions save time by avoiding the need to write formulas from scratch.

(a) COUNT () Function

- **Purpose:** Counts the number of numeric values in a range of cells.
- **Syntax:**

=COUNT(value1; value2; ...)

- **Example:**

If cells **A1:A5** contain: 12, 25, hello, 45, 78

Formula:

=COUNT (A1 : A5)

(b) MAX () Function

- **Purpose:** Returns the largest numeric value in a list or range.

- **Syntax:**

=MAX(value1; value2; ...)

- **Example:**

If cells **B1:B4** contain: 15, 42, 7, 28

Formula:

=MAX(B1:B4)

Q. (9) List any four qualities of an Entrepreneur. Explain any two.

Four Qualities of an Entrepreneur

1. Creativity
2. Risk-taking ability
3. Leadership skills
4. Decision-making ability

Explanation of Any Two:

1. Creativity –
An entrepreneur must think of new ideas, products, or ways of doing things to stand out in the market. Creativity helps in problem-solving and innovation.
2. Risk-taking ability –
Entrepreneurs often face uncertain situations. They must be willing to take calculated risks to start and grow their business, even when success is not guaranteed.

Answer any 3 out of the given 5 questions on Subject Specific Skills.

(3 x 2 = 6)

Q.(10) What is Data and Information ? Explain with example.

Data refers to raw, unprocessed facts, figures, or statistics that, on their own, may not carry much meaning. Data can exist in many forms: numbers, text, images, sounds, or even sensor readings. It is the foundational element for all types of analysis and decision-making. The key point is that data lacks context or organization.

Examples of Data:

- Numbers: 45, 78, 32
- Text: "John", "blue", "apple"

Information, on the other hand, is data that has been processed, organized, or structured in a way that makes it meaningful and useful. When data is analyzed, interpreted, or given context, it transforms into information. It helps individuals or systems make decisions, gain understanding, and form conclusions.

Q.(11) Name and explain any two aggregate functions used in SQL. Give example also.

COUNT

MAX ; Returns the maximum value in a column. Select Max(Column_name) from table_name

MIN

SUM() : It is used to find the total of numbers in a range of cells.

=SUM(A1:A5)

AVERAGE() : It is used to find the average of numbers in a given range of cells.

=AVERAGE(A1:A5)

Q.(12) Write SQL command to create the following table :

Table : Gadget

Column name	Datatype
G_ID	Char(4)
Description	Varchar(20)
Manufacture_date	Date
Price	Decimal
Warranty	Int

Ans : Create Table Gadget (G_ID char(4), Description varchar(20), Manufacture_date Date, Price decimal, Warranty int);

Q.(13) What is E-Governance ? Name any two E-Governance sites of India.

It stands for Electronic Governance. It refers to the usage of internet and communication technology tools. It allows citizens to access government services and information efficiently and effectively. It provides an online to manage and deliver government services, exchange information and engage with the public.

<https://www.india.gov.in>

<https://www.igod.gov.in>

<https://www.india.gov.in/e-governance-portal>

Q.(14) What is the difference between print and println command in Java ?

Command	Description	Example Output
print()	Prints the text and keeps the cursor on the same line (does not add a newline).	System.out.print("Hello"); System.out.print("World"); → Output: HelloWorld
println()	Prints the text and moves the cursor to the next line (adds a newline at the end).	System.out.println("Hello"); System.out.println("World"); → Output:HelloWorld

print → output stays **on the same line**.

println → output moves **to the next line** after printing.

Answer any 2 out of the given 3 questions on Subject Specific Skills.

(2 x 3 = 6)

Q.(15) Name and explain any three types of users available in DBMS. .

Type of User	Role
End user	The person who uses the database to find, update or create information
Database Administrator	Administers the database by Providing access Monitoring its usage Providing technical support Acquiring software and hardware resources
Application programmers	Writing programs using SQL and high level programming languages to interact with database
System Analyst	Interacts with the end user to understand the requirement and then creates the specifications accordingly.

Q.(16) Take the below table as an example. (Table Name : Student)

Student_name	AdmNo	DOB	Marks	MobNo
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Write an SQL query to display for the following :

(a) Student_name, AdmNo and Marks for all the students.

Select student_name, AdmNo, Marks from Student;

(b) Student_name, AdmNo and DOB for students whose Marks are 300 or more.

Select student_name, AdmNo, DOB from Student where Marks>300;

(c) Only the list of Student_name

Select student_name from Student;

Q.(17) What are the best practices for naming variables in Java ? Explain any three

Use meaningful and descriptive names –

Variable names should clearly indicate their purpose.

Example: studentName is better than sn because it tells exactly what the variable stores.

Follow camelCase convention –

In Java, variable names usually start with a lowercase letter, and each new word starts with a capital letter.

Example: totalMarks, averageScore.

Avoid using keywords or special characters –

Java reserved words like class, int, static cannot be used as variable names, and variable names cannot have spaces or special symbols (except _ and \$).

Answer any 3 out of the given 5 questions on Subject Specific Skills.

(3 x 4 = 12)

Q.(18) Write short notes on the following :

(a) Primary key

(b) Foreign key

(c) Candidate key

(d) Super key

(a) Primary Key:

A Primary Key is a column or a set of columns in a database table that uniquely identifies each row in the table. It ensures that there are no duplicate values in the key column(s) and that every row in the table can be uniquely accessed. A primary key is essential for maintaining data integrity and consistency within the database.

(b) Foreign Key:

A Foreign Key is a column or a set of columns in a database table that creates a link between two tables. It refers to the primary key of another table. The foreign key ensures that data in one table corresponds to data in another, establishing a referential integrity between the tables.

(c) Candidate Key:

A Candidate Key is a column or a set of columns in a database table that can uniquely identify each row in the table, similar to a primary key. A table can have multiple candidate keys, but one of them is chosen to be the primary key. The remaining candidate keys are called alternate keys.

(d) Super Key :

A super key is a set of one or more attributes (columns) in a database table that can uniquely identify each record (row) in that table.

Q.(19) Consider the following table : Student

RollNo	Name	Class	Marks	Grade
101	Ramesh	XII	85	A
102	Sunita	XII	72	B
103	Manish	XII	91	A
104	Priya	XII	64	C

Write SQL query for the following :

1. Select Name, Marks from Student where Marks > 80;
2. Select RollNo, Name, Grade from Student where Grade = "A";
3. Select * from Student order by Marks Desc;
4. Select * from Student;

Q.(20) Consider the following table : Order

OrderID	CustomerName	Product	Quantity	Price
1	Rahul	Pen	10	5
2	Meena	Notebook	5	40
3	Suresh	Pencil	20	3

OrderID	CustomerName	Product	Quantity	Price
4	Anita	Geometry Box	2	60

Write SQL Query for the following :

1. Display CustomerName, Product, and TotalAmount (Quantity × Price) for all orders.
2. Display the details of orders where Quantity is more than 5.
3. Display products in alphabetical order of Product name.
4. Display the entire table.

Ans. :

1. SELECT CustomerName, Product, (Quantity * Price) AS TotalAmount
FROM Order;
2. SELECT * FROM Order WHERE Quantity > 5;
3. SELECT Product FROM Order ORDER BY Product ASC;
4. SELECT * FROM Order;

Q.(21) Write and explain any eight precautions that you must take while performing online transactions.

Ans. :

Use secure website

Do not use public computers and networks for making reservation as they can have malware

Do not use unsecured public wi-fi networks for making reservations as unsecured networks can expose your data to potential threats.

Keep software updated

Use strong and unique password

Use secure websites (HTTPS).

Avoid public Wi-Fi for transactions.

Keep device and software updated.

Use strong, unique passwords.

Enable two-factor authentication (2FA).

Check account statements regularly.

Do not share personal or banking details.

Beware of phishing emails and fake websites.

Q.(22) Write a program in Java for the following :

- (a) To print "Hello World"
- (b) To display addition of two numbers 3 and 5.

(a)

```
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello World");
    }
}
```

(b)

```
public class Addition {  
    public static void main(String[] args) {  
        int num1 = 3;  
        int num2 = 5;  
        int sum = num1 + num2;  
  
        System.out.println("The sum of " + num1 + " and " + num2 + " is: " + sum);  
    }  
}
```

***** ALL THE BEST *****