



B.K. BIRLA CENTRE FOR EDUCATION

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

PRE BOARD-II EXAM : 2025-26 INFORMATION TECHNOLOGY (802)

SET-01/802

Class: XII (SUBJECT-4)

Date: 09-12-2025

Admission No. :

Time : 3 hrs.

Max Marks: 60

Roll No. :

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of 24 questions in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 06 questions.
 - ii. There is no negative marking.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 18 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.

MARKING SCHEME

SECTION A: OBJECTIVE TYPE QUESTIONS

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

(4 x 1 = 4)

- (i) A _____ sentence shares straightforward information and always ends with a full stop.
- a) Declarative sentence *
 - b) Interrogative sentence
 - c) Imperative sentence
 - d) Exclamatory sentence
- (ii) Which of the following statements is *incorrect* about physiological motives?
- a) They arise from bodily needs such as hunger and thirst.
 - b) Psychological motives involve achievement and affiliation.
 - c) Physiological motives push behaviour to fulfil essential physical requirements.
 - d) They consist of emotional and mental traits. *
- (iii) Samaira invests her entire evening in solving mock tests because she wants to secure admission to her desired college. This situation reflects:
- a) Intrinsic motivation
 - b) Extrinsic motivation *
 - c) Inspiration
 - d) Self-management

- (iv) _____ reorganizes selected data permanently, whereas filtering only hides unrelated entries without removing them.
- a) Charts b) Predefined functions
c) Sorting * d) Solver
- (v) Dhruv shifted all the loyal workers from his burnt factory to another unit to ensure their safety and job security. This shows his:
- a) Confidence in himself b) Proper supervision
c) Care for employees' well-being * d) Target planning
- (vi) A sentence that expresses strong feelings and typically ends with an exclamation mark is called a/an _____.
- a) Declarative b) Exclamatory *
c) Imperative d) Interrogative

Q.(2) Answer any 5 questions out of the given 7 questions

(5 x 1 = 5)

- [illegible]

Q.(3) Answer any 6 questions out of the given 7 questions

(6 x 1 = 6)

- (i) Which constraint ensures that a column cannot have NULL values?
Ans: NOT NULL
- (ii) Name any two aggregate functions used in SQL?
Ans: SUM, COUNT, AVG, and MAX
- (iii) Consider the table, Cars given below:

Table: Cars

MID	NAME	BRAND	CAPACITY	COLOR
H101	I20	HYUNDAI	5	WHITE
M012	XUV500	MAHINDRA	5	BLUE
H131	VERNA	HYUNDAI	5	BLUE

Identify the degree and cardinality of the table Vehicle.

Ans: 5 Degree and 3 cardinality

- (iv) How can users improve the safety of their passwords when making online payments?
- Using personal info like birthdate
 - Using a mix of letters, numbers, and symbols *
 - Writing the password on paper
 - Sharing the password with friends
- (v) Consider the following table: PRODUCTS

ID	PNAME	PRICE
P001	PEN	50
P002	NOTEBOOK	120
P003	PENCIL	20

Identify the Primary key and Foreign key of the table ORDERS.

- (vi) What kind of online courses does Khan Academy provide?
- Free *
 - Paid
 - Mobile wallets
 - Internet banking
- (vii) What does the R in IRCTC stand for?
- Robot
 - Rover
 - Railway *
 - None of these

Q.(4) Answer any 5 questions out of the given 6 questions.

(5 x 1 = 5)

- (i) Adrisa wanted to book her flight to attend an international conference on “Women and AI” . She needs to book her tickets using on online reservation system. Help her to follow the correct sequence of steps to do the same.
- Make the payment
 - Open the online reservation website
 - Choose the dates of travel
 - Browse and search for the required information
- B, D, C, A *
 - A, B, C, D
 - A, D, C, B
 - B, A, D, C
- (ii) The _____ aggregate function in SQL is used to find the average values of a numeric column:
- Average()*
 - Avg()
 - Mean()
 - Mid()
- (iii) NICNET – A national satellite based computer network in India was launched in the year :
- 1986
 - 1987*
 - 1990
 - 1992
- (iv) **State True or False :**
- The customer can select the goods to be purchased and store them in their online shopping basket. (True)
- (v) The first step in online shopping is to :
- Visit the websites *
 - Open your smartphone
 - Use your debit card
 - None of these
- (vi) Which Java statement is used to stop a loop before it finishes all its iterations?
- break *
 - exit
 - continue
 - stop

Q.(5) Answer any 5 questions out of the given 6 questions

(5 x 1 = 5)

(i) State True or False :

Fixing of all the application bugs and fixing them is part of the Testing Phase of the project.

Ans: False

- (ii) Aparna wanted to remove the table PERSONAL permanently from the database SCHOOL. Write the command to help her do the same.

Ans: Drop table PERSONAL

- (iii) A named constraints in a table can be easily deleted or updated using the _____ command.

Ans: Alter table

- (iv) Differentiate between the following two java statements:

char Alpha= "A" ; //Statement #1

String Name= "Ajay"; //Statement #2

Ans: Statement #1 uses char type for a single character, Statement #2 uses String for text.

- (v) 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.

- (vi) A Java compiler instead of translating Java code to machine language code, translates it into

Ans: Bytecode

Q.(6) Answer any 5 questions out of the given 6 questions

(5 x 1 = 5)

- (i) What will be the result of the following code?

String s = "JAVA";

System.out.println(s.length());

- (a) 3 (b) 4 * (c) 5 (d) Error

- (ii) The wrapper class of the primitive type char in Java is

Ans: Character

- (iii) Which keyword is used to prevent a method from being overridden in Java?

- (a) static (b) final * (c) private (d) protected

- (iv) What is the result of the following code snippet ?

String str = "Hello";

System.out.println(str.indexOf('l'));

- (a) 1 (b) 2 * (c) 3 (d) -1

- (v) Which Java loop checks the condition **after** executing the loop body at least once?

- (a) for (b) while (c) do-while * (d) None of these

- (vi) What property of a table is avoided with the use of primary key ?

- (a) Data inconsistency * (b) Data privacy breach
(c) Data redundancy (d) Online data search

SECTION B: SUBJECTIVE TYPE QUESTIONS

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

(3 x 2 = 6)

Answer each question in 20-30 words.

Q. (7) What is Active Listening?

Ans: Active listening is the process of fully concentrating, understanding, responding, and remembering what the speaker is saying. It involves paying attention, asking questions, and giving feedback to show understanding.

Q. (8) Explain Positive Attitude.

Ans: Positive attitude refers to seeing the good in situations, having confidence, and staying motivated even during challenges. It helps improve performance, relationships, and overall well-being.

Q. (9) Differentiate between workbook and worksheet?

Ans:

Workbook	Worksheet
A file in Excel containing one or more worksheets.	A single spreadsheet page inside a workbook.
Stores data across multiple sheets.	Stores data in rows and columns on one sheet.

Q. (10) Explain any two qualities of an entrepreneur.

Ans: • **Risk-taking ability** – Entrepreneurs take calculated risks to develop new ideas or businesses.

• **Innovation** – They constantly create new products, services, or methods to improve efficiency and market demand.

Q. (11) Write two ways to reduce greenhouse gases.

Ans: • Using renewable energy like solar or wind power. • Planting more trees and reducing deforestation.

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

(3 x 2 = 6)

Q.(12) What are the benefit of naming a constraint?

Ans: • Helps in identifying and modifying constraints easily.

• Improves database management and clarity in SQL commands.

Q.(13) Write the SQL command to Create a employee table

Employee_num Char(4)	HRA int	DA int	Gross decimal	PF Contribution int
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**Ans: CREATE TABLE Employee (
Employee_num CHAR(4),
HRA INT,
DA INT,
Gross DECIMAL,
PF_Contribution INT**

);

Q.(14) Give the output of the following code segment of Java-

```
int x = 1;  
while (x <= 5)  
{  
    System.out.print(x + " ");  
    x += 2;  
}
```

Ans: 1 3 5

Q.(15) Rewrite the following code after correcting the syntax errors, underline each correction made:

```
int sum = 0;  
for (int i = 1; i <= 4; i++)
```

```
{
    sum = sum + i;
}
System.out.println(sum);
```

Ans: 10

Q.(16) What are comments in Java programs and why are they important?

Ans: Comments are non-executable statements used to explain code.

They are important because they improve readability, help debugging, and allow developers to understand logic easily.

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

(2 x 3 = 6)

Q.(17) Explain the following aggregate functions with examples.

(a) SUM (b) MAX (c) AVG

Ans: (a) **SUM** – Returns the total of numeric values.

Example: `SELECT SUM(Salary) FROM Employee;`

(b) **MAX** – Returns the highest value in a column.

Example: `SELECT MAX(Marks) FROM Student;`

(c) **AVG** – Returns the average of numeric values.

Example: `SELECT AVG(Price) FROM Product;`

Q.(18) Consider the following string variable :

String str1 = "Hello";

String str2 = "morning";

Write the code statements in Java :

(a) To convert the first letter of a string variable "str1" into uppercase.

(b) To convert combined length of string str1 and str2.

(c) To display str1 and str2 after joining them.

Ans:

`System.out.println(str1.toUpperCase().charAt(0));`

`System.out.println(str1.length() + str2.length());`

`System.out.println(str1 + str2);`

Q.(19) What is the way in which DBMS and programming is useful in the application of banking, e-commerce and payroll management systems ?

Ans: DBMS and programming help automate and securely manage large data in **banking, e-commerce, and payroll** systems. They allow quick processing, accurate calculations, secure transactions, and efficient report generation.

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

(3 x 4 = 12)

Q.(20) Write short notes on the following :

(a) End User (b) DB Administrator (c) Application Programmer (d) System Analyst

Ans: (a) **End User** – A person who directly uses the software or database system.

(b) **DB Administrator (DBA)** – Manages database access, security, performance, and maintenance.

(c) **Application Programmer** – Writes software code to interact with the database and perform various functions.

(d) **System Analyst** – Analyzes requirements and designs solutions to improve system performance.

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

Ans: Precautions for Online Transactions

1. Use strong and secure passwords.
2. Avoid using public Wi-Fi for payments.
3. Verify website security (look for HTTPS).
4. Do not share OTP, PIN, or card details with anyone.

Q.(22) Write a program in Java to take two strings as input and report their lengths.

```
Ans: public static void main(String[] args) {  
    Scanner sc = new Scanner(System.in);  
  
    System.out.println("Enter first string: ");  
    String s1 = sc.nextLine();  
  
    System.out.println("Enter second string: ");  
    String s2 = sc.nextLine();  
  
    System.out.println("Length of first string: " + s1.length());  
    System.out.println("Length of second string: " + s2.length());  
}
```

Q.(23) What is the use of ResultSet data type in Java with database?

Ans: ResultSet is used to store and access the records returned from a database query. It allows reading data row by row from the database.

Q.(24) Write a program in Java to print the table of 8.

```
Ans: class Table8 {  
    public static void main(String[] args) {  
        for(int i = 1; i <= 10; i++) {  
            System.out.println("8 x " + i + " = " + (8 * i));  
        }  
    }  
}
```

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