



B.K. BIRLA CENTRE FOR EDUCATION

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



TERM 1 EXAMINATION (2026-27)
INFORMATION TECHNOLOGY (802)
SET - 1

Class: XII (SUBJECT-5)

Date: 04/09/26

Admission No.

Time : 3 hrs.

Max Marks: 60

Roll No. :

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of 23 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 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.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.(1) Answer any 4 out of the given 6 questions:

(4 x 1 = 4)

- (i) Which of the following is the last element of the communication cycle?
(a) Sender (b) Message (c) Channel (d) Feedback
- (ii) Which of the following best describes active listening?
(a) Listening passively without responding
(b) Hearing words without comprehension
(c) A process of comprehending and offering support to the speaker
(d) Interrupting the speaker to share your experiences
- (iii) In the acronym 'SMART' used for goal setting, the letter 'M' stands for
(a) Motivated (b) Measurable (c) Managed (d) Modern
- (iv) Which personality trait is characterised by anxiety, self-doubt, depression and excessive worrying?
(a) Extraversion (b) Agreeableness (c) Openness (d) Neuroticism
- (v) A workbook in a spreadsheet refers to:
(a) A single document only
(b) A spreadsheet with one or more worksheets
(c) A rectangular box where a row and a column meet
(d) The toolbar of the software application
- (vi) The default file extension of a file saved in OpenOffice Calc is
(a) .odt (b) .ods (c) .odp (d) .odb

Q.(2) Answer any 8 out of the given 10 questions:

(8 x 1 = 8)

- (i) DBMS stands for
- (a) Data Base Master System (b) Database Management System
(c) Data Backup Management Software (d) Digital Base Managing System
- (ii) Fill in the blank: The number of attributes in a relation is called the of a relation.
- (a) Degree (b) Cardinality (c) Tuple (d) Domain
- (iii) In a relational database, when the value of an attribute in a tuple is not known, not available or not applicable, which special value is used to represent it?
- (a) ZERO (b) SPACE (c) NULL (d) DEFAULT
- (iv) Which of the following is not an advantage of using a DBMS?
- (a) Reduction in data redundancy (b) Improved data consistency
(c) Improved data availability (d) Increased data duplication
- (v) A single row of a table in a relational database is known as a
- (a) Attribute (b) Tuple (c) Domain (d) Degree
- (vi) Which key uniquely identifies each record of a table and cannot contain a NULL value?
- (a) Foreign key (b) Primary key (c) Alternate key (d) Composite key
- (vii) The duplication of the same data in more than one file or table is known as
- (a) Data consistency (b) Data redundancy
(c) Data integrity (d) Data security
- (viii) Which of the following is an application of a Database Management System (DBMS)?
- (a) Storing students' academic records (b) Creating digital paintings
(c) Playing audio and video files (d) Writing fictional stories
- (ix) The number of tuples present in a relation is called its
- (a) Degree (b) Domain (c) Cardinality (d) Attribute
- (x) State whether the following statement is True or False:
A Database Management System allows more than one user to access the same data at the same time.

Q.(3) Answer any 5 out of the given 6 questions:

(5 x 1 = 5)

- (i) Which SQL command is used to display the list of all the databases present in the server?
- (a) SHOW TABLES; (b) SHOW DATABASES;
(c) DISPLAY DATABASES; (d) LIST DATABASES;
- (ii) Which of the following is not an aggregate function in SQL?
- (a) COUNT() (b) MAX() (c) SUM() (d) UPDATE()
- (iii) What is the purpose of the WHERE clause in SQL?
- (a) It adds a new column to a table.
(b) It filters rows on the basis of a condition.
(c) It sorts the rows in ascending or descending order.
(d) It renames the columns of a table.
- (iv) Which SQL clause is used to sort the data in ascending or descending order?
- (a) ORDER BY (b) SORT BY (c) GROUP BY (d) ARRANGE BY
- (v) State whether the following statement is True or False:
The following SQL command is used to delete a relation/table from a relational database.
`DELETE TABLE STUDENT;`
- (vi) Which SQL command is used to modify the attribute values of one or more tuples in a table?
- (a) INSERT (b) UPDATE (c) DELETE (d) SELECT

Q.(4) Answer any 5 out of the given 6 questions on Operating Web based Application.(5 x 1 = 5)

- (i) In which phase of the creation of a web application is the actual layout of the application designed?
- (a) Requirement Definition (b) Design
(c) Implementation (d) Testing
- (ii) Which of the following is known as the National Portal of India?
- (a) www.india.gov.in (b) www.irttc.co.in

- (c) www.goidirectory.nic.in (d) www.w3schools.com
- (iii) NICNET, the national satellite-based computer network, was launched in the year
- (a) 1975 (b) 1987 (c) 1990 (d) 1995
- (iv) Unit testing, integration testing and user acceptance testing are all forms of
- (a) Front-end development (b) Back-end development
(c) Testing (d) Deployment
- (v) Which of the following correctly describes online shopping?
- (a) Customers can buy only books and electronics over the Internet.
(b) Customers can browse items online, place them in a virtual basket and make payment.
(c) Customers can shop online, but must pay only in cash at delivery.
(d) Customers can select items online, but cannot have them delivered.
- (vi) Which of the following is an example of an e-Governance website of India?
- (a) www.amazon.in (b) www.uidai.gov.in
(c) www.gmail.com (d) www.wikipedia.org

Q.(5) Answer any 8 out of the given 10 questions:

(8 x 1 = 8)

- (i) GUI, in the context of programming, stands for
- (a) General User Interface (b) Graphical User Interface
(c) Graphical Utility Interface (d) General Utility Interface
- (ii) Which of the following operators in Java is used to compare two values for equality?
- (a) = (b) == (c) != (d) >
- (iii) What will be the value of x after the execution of the following statements?
- ```
int x = 7;
x += 3;
```
- (a) 7 (b) 3 (c) 10 (d) 21
- (iv) What is the result of the expression  $9 \% 4$  in Java?
- (a) 2 (b) 1 (c) 2.25 (d) 0
- (v) Which loop in Java executes at least once even when the condition is False?
- (vi) Which of the following is an invalid variable name in Java?
- (a) product\_1 (b) marks (c) sales123 (d) total-Marks
- (vii) How many bits of memory does a short type variable use in Java?
- (viii) In Java, which operator is used to access the data members and method members of an object?
- (a) equal (=) operator (b) plus (+) operator  
(c) dot (.) operator (d) comma (,) operator
- (ix) Which of the following is a not logical operator in Java?
- (a) && (b) || (c) ! (d) %
- (x) Which part of a “for” loop in Java is optional?
- (a) Initialization (b) Condition  
(c) Increment/Decrement (d) All part are mandatory

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

**Answer any 3 out of the given 5 questions: Answer each question in 20-30 words. (3 x 2 = 6)**

- Q.(6)** What is meant by the communication cycle? Name any two elements of the communication cycle. 2
- Q.(7)** “Listening skill is one of the most important skills in communication.” Mention any two points to support this statement. 2
- Q.(8)** Define self-motivation. Write any one difference between internal and external motivation. 1+1=2
- Q.(9)** Write any two benefits of having a positive attitude. 2
- Q.(10)** What is a cell address in a spreadsheet? Explain with the help of an example. 1+1=2

**Answer any 3 out of the given 5 questions: Answer each question in 20 – 30 words.(3 x 2 = 6)**

**Q.(11)** What is the difference between data and information? Explain with the help of an example. 2

**Q.(12)** Write one similarity and one difference between the CHAR and VARCHAR data types in SQL. 1+1=2

**Q.(13)** Write any two differences between the print() and println() methods in Java. 2

**Q.(14)** Write the output of the following Java code: 2

```
public class SumClass {
 public static void main(String[] args) {
 int x, y, sum;
 x = 5;
 y = 5;
 sum = x + y++;
 System.out.println("y = " + y);
 System.out.println("sum = " + sum);
 }
}
```

**Q.(15)** Explain do-while loop with example. 1+1=2

**Answer any 2 out of the given 4 questions: Answer each question in 30 – 50 words.**

(2 x 3 = 6)

**Q.(16)** Explain the following keys used in a Database Management System: 3

(a) Primary Key                      (b) Candidate Key                      (c) Foreign Key

**Q.(17)** What is e-Governance? Name any two e-Governance websites of India and write one use of each. 1+2=3

**Q.(18)** Rewrite the following Java program using a while loop: 3

```
public class Monuments {
 public static void main(String[] args) {
 for (int i = 0; i < 5; i++) {
 if (i % 2 == 0)
 System.out.println("Monument-1: Taj Mahal");
 else
 System.out.println("Monument-2: Gateway of India");
 System.out.println("Monuments of India");
 }
 }
}
```

**Q.(19)** Explain any three primitive data types available in Java along with the size occupied by each in memory. 3

**Answer any 3 out of the given 4 questions:**

**Answer each question in 50 – 80 words.** (3 x 4 = 12)

**Q.(20)** Answer the following questions related to a Database Management System: 1+1+1+1=4

(a) What is a database? Write any one advantage of using a database over a traditional file system.

(b) Define the terms degree and cardinality of a relation.

(c) What is data redundancy? How does a Database Management System help in reducing it?

(d) Name any two commonly used DBMS software.

**Q.(21)** (a) Write any two advantages of using an Online Reservation System. 2+2=4

(b) Mention any two precautions that should be taken while performing online transactions.

**Q.(22)** Explain Switch Case with proper syntax and example. 4

**Q.(23) (a)** Write a Java program to perform the following tasks: **2+2=4**

- Store an employee's basic salary of ₹ 50,000 in a variable named basicSalary.
- Calculate the dearness allowance (DA) as 50% of the basic salary and store it in a variable named allowance.
- Add the dearness allowance to the basic salary to compute the total salary and store the result in a variable named totalSalary.
- Display the value of the total salary.

**(b)** What will be the output of the following Java program when executed?

```
public class Counter {
 public static void main(String[] args) {
 int i = 15;
 while (i <= 25) {
 System.out.println("Value = " + i);
 i = i + 2;
 }
 }
}
```

**\*\*\*\*\* END OF SET - 1 \*\*\*\*\***