



ST. JOSEPH'S COLLEGE, PRAYGAGRAJ
HALF YEARLY TEST- OCTOBER 2023
COMPUTER APPLICATIONS
CLASS- IX

MAXIMUM MARKS: 100

TIME: 2 HOURS

This Paper is divided into two Sections.

*Attempt all questions from Section A and any four questions from Section B.
The intended marks for questions or parts of questions are given in brackets [].*

Section A

*(Attempt **all** questions from this Section.)*

Question 1. Choose the correct answer and write the correct option.

[20]

- i. What is the extension of a compiled java class
 - a) .txt
 - b) .java
 - c) .class
 - d) Both (b) and (c)
- ii. Which one of the following is not a Java feature?
 - a) object oriented
 - b) pointers
 - c) dynamic
 - d) portable
- iii. What is the numerical range of a char data type in Java? —
 - a) 0 to 65535
 - b) -128 to 127
 - c) 0 to 256
 - d) 0 to 32767
- iv. Which is the default Java package that will be auto imported in a Java program?
 - a) java.io
 - b) java.util
 - c) java.net
 - d) java.lang
- v. The ASCII codes of number ranges from:
 - a) 48-57
 - b) 49-57
 - c) 47-57
 - d) 49-58
- vi. What is the logical AND operator in Java?
 - a) &&
 - b) ==
 - c) ||
 - d) <=
- vii. Which component is responsible for converting bytecode into machine specific code? —
 - a) JVM
 - b) JDK
 - c) JRE
 - d) None of these
- viii. ASCII is a _____ set of codes.
 - a) 8-bit
 - b) 7-bit
 - c) 16-bit
 - d) 6-bit
- ix. Which concept of Java is achieved by combining methods and attribute into a class?
 - a) Encapsulation
 - b) Abstraction
 - c) Polymorphism
 - d) Inheritance
- x. Which of the following is a method having same name as that of its class?
 - a) class
 - b) constructor
 - c) finalize
 - d) delete
- xi. How many primitive data types exists in Java?
 - a) 8
 - b) 6
 - c) 7
 - d) 10



- xii. Which of these is necessary condition for automatic type conversion in Java?
- The destination type is smaller than source type
 - The destination type is larger than source type
 - The destination type can be larger or smaller than source type
 - All of these
- xiii. What will be the output of the following Java program?
- ```
class prg_12
{
 public static void main (String args[])
 {
 int x;
 x = 5;
 {
 int y = 6;
 System.out.print(x + " " + y);
 }
 System.out.println(x + " " + y);
 }
}
```
- Runtime error
  - 5 6 5 6
  - 5 6 5
  - Compile error
- xiv. In Java, which character is used to terminate a statement?
- :
  - ,
  - ;
  - .
- xv. What is an abstraction in object-oriented programming?
- Hiding the implementation and showing only the features
  - Hiding the important data
  - Showing the important data
  - Hiding the implementation
- xvi. The feature by which one object can interact with another object is \_\_\_\_\_.
- Message reading
  - Data binding
  - Message passing
  - Data transfer
- xvii. Java is known for its "Write Once, Run Anywhere" capability. What does this mean?
- Java programs can only be written once.
  - Java programs can run on any operating system without modification.
  - Java programs can run without any errors.
  - Java programs can be written in any programming language.
- xviii. Error occurs in a program when
- Syntax of the program language is not followed
  - The program does not run properly or does not execute at all
  - The program produces an incorrect result
  - All of these

- xix. What will be the output of the following Java code?

## class conversion

```
{
 public static void main (String args[])
 {
 double a = 295.04;
 int b = 300;
 byte c = (byte) a;
 byte d = (byte) b;
 System.out.println(c + " " + d);
 }
}
```

- a) 38 43                      b) 39 44  
c) 295 300                  d) 295.04 300

- xx. Which The keyword used to declare a Java package is \_\_\_\_.

- a) package                      b) pkg  
c) pkge                         d) None of these

### Question 2.

i.

- What are operands? Give an example.
- What is the purpose of *new* operator? Give an example.

- ii. What are keywords? What is the use of *import* keyword?

- iii. Evaluate the following expression

- a) `int a=2, b=3, c=9;`  
`int d=a-(b++)*(--c);`  
`System.out.print(d);`

b) `int v=200, s, n=550;`  
`s=(n+v)>1750?400:500;`  
`System.out.print(s);`

- iv. Explain the following:

- Postfix and prefix increment
- Postfix and prefix decrement

- v. What is UNICODE? List the use of \\ and \r escape sequences.

- vi. What is the output of the following in Java statement?

- a. `char x='a';`  
`System.out.println(x+x);`  
`System.out.println((int)x+(int)x);`
- b. `int a=5,b=10;`  
`int c=(a*b/2)*4;`  
`System.out.print(a+"t"+c);`

- vii. Give one difference and one example of each of the following:

- next()* and *nextLine()*
- Syntax and Runtime errors

- viii. Convert the following into an **if else** block:

- ```
a. f=(v==100) ? 0.1*v : 0.2*v;
b. int x = 10;
   int y = 20;
   int result = (x > y) ? x : y;
```

- ix. What do you mean by precedence of operators? Explain with an example. [2]

- x. What is the need of a *class* in Java? Write the full form of JDK and JVM. [2]

Section B

(Answer any **four** questions from this Section.)

The answers in this section should consist of the programs in either BlueJ environment or any program environment with java as the base.

Each program should be written using **variable description** so that the logic of the program is clearly depicted.

Flowcharts and algorithms are not required.

Question 3. [15]

Write a program in java to swap two strings entered by the user using a third variable. Print both original and final swapped results.

Question 4. [15]

A shopkeeper offers 30% discount on purchasing articles whereas the other shopkeeper offers two successive discounts 20% and 10% for purchasing the same articles. Write a program in Java to compute and display the discount. Take the price of an article as the input.

Question 5. [15]

Write a program to accept a four-digit number and print the sum of first two and product of last two digits in the in the number. Assume that the user will enter a proper four-digit number.

Question 6. [15]

Write a program in Java to input number of days and convert days into:

- i) Hours
- ii) Minutes
- iii) Seconds.

The days must be entered by the user and print all the details with proper message.

Note: The solution to the question should be written in a single program not separately.

Question 7. [15]

Write a program in Java using ASCII value that converts a lowercase character to uppercase and uppercase character to lowercase. The character must be entered by the user of the program. Print all the details with proper message.

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