

St. Mary's Convent Inter College, Prayagraj

First Terminal Examination 2025-26

Subject – Computer Application

Time : 2hrs.

Class - 9

M.M. : 100

Name : Roll No. Date :

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this Paper is the time allowed for writing the answers.

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 (40 marks)

(Attempt all questions from this Section.)

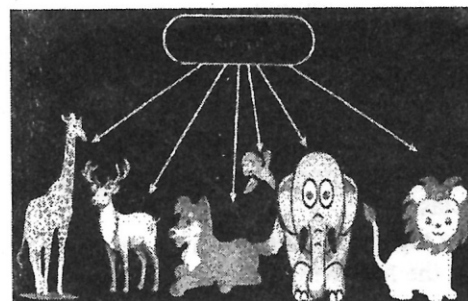
[20]

Question 1

Choose the correct answers to the questions from the given options.

i. Name the feature of java depicted in the above picture.

- (a) Encapsulation
- (b) Inheritance
- (c) Abstraction
- (d) Polymorphism



(ii) The expression which uses $> =$ operator is known as:

- (a) relational
- (b) logical
- (c) arithmetic
- (d) assignment

(iii) Ternary operator is a:

- (a) logical operator
- (b) arithmetic operator
- (c) relational operator
- (d) conditional operator

(iv) The number of bytes occupied by a character datatype.

- (a) 2 bytes
- (b) 6 bytes
- (c) 4 bytes
- (d) 12 bytes

(v) The method of Scanner class used to accept a double value is:

- (a) nextInt()
- (b) nextDouble()
- (c) next()
- (d) nextInteger()

(vi) Among the following which is a keyword:

- (a) every
- (b) all
- (c) case
- (d) each

(vii) The output of `Math.round(6.6) + Math.ceil(3.4)` is:

- (a) 9.0
- (b) 11.0
- (c) 10.0
- (d) 11

(viii) Name the type of error, if any in the following statement: `System.out.print("HELLO")`

- (a) logical
- (b) no error
- (c) runtime
- (d) syntax

(ix) Name the package that contains Scanner class:

- (a) java.lang
- (b) java.util
- (c) java.io
- (d) java.awt

(x) Which of the following is a valid Integer constant:

- 1. 4
- 2. 4.0
- 3. 4.3f
- 4. "four"

- (a) Only 1.
- (b) 1. and 3.
- (c) 2. and 4.
- (d) 1. and 2.

(xi) Assertion(A): In java statements written in lower case letter or upper case letter are treated as the same.

Reason(R): Java is a case sensitive language.

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not a correct explanation of Assertion(A)
- (c) Assertion (A) is true and Reason (R) is false
- (d) Assertion (A) is false and Reason (R) is true

(xii) The final result of a program after execution appears on the :

- (a) edit window
- (b) terminal window
- (c) program window
- (d) None of these



- (xiii) To provide the actual value to a declared variable is known as –
(a) Storage (b) Declaration (c) Initialisation (d) None of these
- (xiv) Which of the following operator creates dynamic memory
(a) New (b) Now (c) new (d) All are correct
- (xv) The result of `System.out.println(Math.max(10,12)-Math.pow(2,3))` is –
(a) 10 (b) 4 (c) 8.0 (d) 4.0
- (xvi) The return value of `Math.sqrt(Math.abs(-49))` is –
(a) 7 (b) 7.0 (c) -7.0 (d) 7.5
- (xvii) What will be the output of the following code-
`int marks = 35;
if (marks >= 50)
 System.out.println("Pass");
else
 System.out.println("Fail");`
(a) Pass (b) Fail (c) Error (d) 35
- (xviii) Which of the following is invalid?
(a) `if (true) { System.out.println("Yes"); }` (b) `if (5 < 10) { System.out.println("Okay"); }`
(c) `if (5) { System.out.println("Wrong"); }` (d) `if (false || true) { System.out.println("Good"); }`
- (xix) which of the following is not a token?
(a) Operator (b) Statement (c) Keyword (d) Identifier
- (xx) Which operator invokes member of a class?
(a) New (b) dot (c) object (d) All are correct

Question 2

- a) Write the *java expression* to find the *product* of the *square root* of *P* and the *square* of *Q* using the methods of **Math** class [2]
- b) Evaluate the expression when *x* is 4: `x += x ++ * ++ x % 2;` [2]
- c) Convert the following to switch - case : [2]
`if (ch == 'A')
 System.out.print("Grade A");
else if (ch == 'B')
 System.out.print("Grade B");
else if (ch == 'C')
 System.out.print("Grade C");
else
 System.out.print("Grade Unknown");`
- d) State the Math function for the following : [2]
1) To find the cube root of a value
2) That returns any value between 0 and 1.
- e) Give the output of the following code if : 1) year =1900 2) year = 2020 [2]
`if (year % 100 == 0)
{
 if (year % 400 == 0)
 System.out.println ("LEAP YEAR ");
 else
 System.out.println (" NOT A LEAP YEAR ");
}
else
 System.out.println (" NOT A CENTURY YEAR ");`
- f) Convert the following statement into if-else statements: [2]
`String s = (x < 15) ? "Small " : (x < 22) ? "Tiny " : "Huge " ;`
- g) Write **statements only** to perform the following : [2]
1) To input a character using the Scanner class function
2) Using Ternary operator find the least integer between *p* and *q*
- h) Consider the following variables and their data types : `int a, b ; float m ; long n ; double z.` [2]
Predict the data type of the expression(show working) : `(a - b) * m + n / z`
- i) A student executes the following program segment and gets an error. Identify the statement which has an error, correct the same to get the output as **WIN**. [2]
`boolean x = true;
switch(x)`



```
{
    case 1: System.out.println("WIN"); break;
    case 2: System.out.println("LOSE");
}
```

- j) Pragati was asked to write a java code to calculate the *surface area of a cone*, the following code was written by her: (Surface area of a cone is $A = \pi RL$ and $L = \sqrt{R^2 + H^2}$) [2]

```
class area
{
    public static void main( String args[])
    {
        double R=5.0, H=4.5, L, A ;
        A = 22.0/7 * R* L ;
        L = Math.sqrt( R*R + H*H) ;
        System.out.println( A);
    }
}
```

Specify the *type of error* in the above program, correct and write the program to be error free.

SECTION B (60 marks)

(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 / mnemonic codes** so that the logic of the program is clearly depicted. Flowcharts and algorithms are not required.

Question 3.

The City library charges fine from members if the books were not returned on time as per the following table- [15]

Number of days late	Magazines fine per day	Text book fine per day
up to 5 days	₹1	₹2
6 to 10 days	₹2	₹3
11 to 15 days	₹3	₹4
16 to 20 days	₹5	₹6
more than 20 days	₹6	₹7

Using the switch statement, write a program in java to input name of person, number of date late and type of book-'M' for Magazine and 'T' for Text book. Compute the total fine and display it along with the name of the person.

Question 4.

A number is called RiWi number if the last two digits are same. Input a number and verify whether its a RiWi number or not. [15]

Question 5.

A company provides motorbike on rent to its members only. Create a class bike with the following data members: [15]

int bkno (bike number), int phno (phone number), int idno (Id-number of member), int days (number of days the bike is taken on rent) and int charge (to store the rental charges)

Write a program to input the suitable values of above data members. Calculate the rental charges for the bike taken on rent as per the given criteria:

Number of days	Rate per day
First 5 days	Rs. 500 per day
Next 5 days	Rs. 400 per day
Rest of the days	Rs. 200 per day

Print the output in the following format:

Bike No.	Phone No.	Member ID No.	No. of Days	Rent to be paid
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Question 6.

[15]

A school is allotting grades and remarks based on total marks (assumed out of 500) obtained by the student as per the following criteria:

Marks obtained	Grade allotted	Remark on grades
85 – 100	A	Excellent
60 – 84	B	Good
40 – 59	C	Fair
less than 40	D	Needs Improvement

Write a program to input marks obtained and print the grade allotted, along with the remark.

Question 7.

[15]

Write a program with the following menu options and users choice statement to find

- (a) Area of a square
- (b) Area of rectangle
- (c) Area of a circle

Input side to find area of square, length and breadth to find area of rectangle and radius to find the area of circle by using the following formulas-

Square=Side*Side

Rectangle = length * breadth

Circle= πr^2

Question 8.

[15]

A hotel has following special rates for stay depending upon number of days :

Number of days	Rate
First 3 days	Rs. 350/- per day
For next 3 days	Rs. 300/- per day
For next 3 days	Rs. 275/- per day
Any day beyond 9 days	Rs. 225/- per day

Write a program to input number of days stayed, room number allotted, check-in time and check-out time.

Calculate the bill amount. Print number of days stayed, room number, check-in time, check-out time and total amount to be paid by the person.

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