

Self Assessment Paper

General Instructions :

Answer 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

1. (a) Write a Java expression for the following:
 $|x^2 + 2xy|$ [2]
- (b) Write the return data type of the following functions:
 - (i) startsWith() [2]
 - (ii) random() [2]
- [AI]** (c) Why is the main() method declared static? [2]
- (d) Name the operators listed below:
 - (i) < (ii) ++ (iii) && (iv) ?: [2]
2. (a) Write a Java expression for the following :
 $ax^5 + bx^3 + c$ [2]
- [AI]** (b) What is the difference between the Scanner class functions *next()* and *nextLine ()* ? [2]
- (c) What is meant by a package? Name any two Java Application Programming Interface packages. [2]
- (d) What are the types of casting shown by the following examples ?
 - (i) `double x =15.2;`
`int y =(int) x;`
 - (ii) `int x =12;`
`long y = x;` [2]
- (e) What will be the output when the following code segments are executed?
 - (i) `String s = "1001";`
`int x = Integer.valueOf(s);`
`double y = Double.valueOf(s);`
`System.out.println("x=" +x);`
`System.out.println("y=" +y);`
 - (ii) `System.out.println("The King said \"Begin at the beginning!\" to me.");` [2]

3. (a) State the difference between token and identifier. [2]
 (b) When there are multiple definitions with the same function name, what makes them different from each other? [2]
 (c) What do you understand by data abstraction? Explain with an example. [2]
 [AI] (d) Explain with an example the if-else -if construct. [2]
 (e) State the total size in bytes, of the arrays a [4] of char data type and p [4] of float data type. [2]
 [AI] (f) What is meant by precedence of operators? [2]
 (g) Write the difference between length and length() functions. [2]
 [AI] (h) Why we cannot override static method? [2]
 (i) In how many ways can we create the String object? [2]
 (j) Why compiler created constructor is called as default constructor? [2]

Section - B

(60 Marks)

Attempt **any four** questions from this Section

The answer in the Section should consist of the **Programs in either Blue J environment or any program environment with Java as the base.**

Each program should be written using **Variable descriptions/Mnemonic Codes** so that the logic of the program is clearly depicted.

Flow Charts and Algorithms are **not required.**

- [AI] 4. Write a program to accept a sentence and print only the first letter of each word of the sentence in capital letters separated by a full stop.

Example:

Input : "I love to learn Java"

Output : I.L.TLJ. [15]

5. Write a program to accept a number and check and display whether it is a spy number or not. (A number is spy if the sum of its digits equals the product of its digits.)

Example : consider the number 1124, Sum of digits = 1 + 1 + 2 + 4 = 8

Product of the digits = 1 × 1 × 2 × 4 = 8 [15]

6. Shasha Travels Pvt. Ltd. Gives the following discount to its customers :

Ticket amount	Discount
Above ₹ 70000	– 18%
₹ 55001 to ₹ 70000	– 16%
₹ 35001 to ₹ 55000	– 12%
₹ 25001 to ₹ 35000	– 10%
Less than ₹ 25001	– 2%

Write a program to input the name and ticket amount for the customer and calculate the discount amount and net amount to be paid. Display the output in the following format for each customer :

1. Sno, name, charges, discount, netAmount.
 2. 1 - - - -

(Assume that there are 15 customers, first customer is given the serial no (Sno.) 1, next customer 2 ... and so on. [15]

- [AI] 7. Write a menu driven program to access a number from the user and check whether it is a BUZZ number or to accept any two numbers and to print the GCD of them.

(a) A BUZZ number is the number which either ends with 7 or is divisible by 7.

(b) GCD (Greatest Common Divisor) of two integers is calculated by continued division method. Divide the larger number by the smaller; the remainder then divides the previous divisor. The process is repeated till the remainder is zero. The divisor then results the GCD. [15]

To know about more useful books for class-10 [click here](#)


8. Write a program to input a number and print whether the number is a special number or not. (A number is said to be a special number, if the sum of the factorial of the digits of the number is same as the original number). [15]
- AI** 9. Write a program to input and sort the weight of ten people. Sort and display them in descending order using the bubble sort technique. [15]



Finished Solving the Paper ?
Time to evaluate yourself !
<https://qrqo.page.link/Y2dpw>

OR

SCAN THE CODE



For elaborate Solutions

**OSWAAL COGNITIVE
LEARNING TOOLS**

