



PAC INSTITUTE OF TECHNOLOGY AND SOCIAL STUDIES JANUARY – APRIL 2025 ASSESSMENT

FORMATIVE ASSESSMENT

Qualification / Course : COMPUTER SCIENCE LEVEL 6

Unit of Competency : FUNDAMENTALS OF JAVA PROGRAMMING

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE:

- 1. Read all the instructions carefully before attempting the question*
- 2. This paper consists of two sections, A and B*
- 3. You are allowed 2 Hours to Answer the questions*
- 4. Marks for each question are indicated in brackets*
- 5. Write your responses in the Separate Answer booklet provided*
- 6. Do not write anything in this question paper*

SECTION A [40 MARKS]
Answer all questions in this section

1. Identify any **TWO** object-oriented programming languages other than Java. (1 Mark)
2. **Distinguish** between local and global variables. (4 Marks)
3. Explain the following terms:
 - a. Class (2 Marks)
 - b. Object (2 Marks)
4. Explain **THREE** types of errors encountered during programming giving examples in each case. (6 Marks)
5. Explain **TWO** types of code in Java programming language. (4 Marks)
6. Write a program in Java programming language that **calculate** the sum of five elements. (4 Marks)
7. Enumerate any **TWO** rules for creating identifiers in Java. (4 Marks)
8. Highlight **FOUR** primitive data types in java. (4 Marks)
9. Explain the difference between System.out.print () and System.out.println () as used in java programming language. (4 Marks)
10. Enumerate any **THREE** access modifiers used in a class declaration in Java. (3 Marks)
11. State any **TWO** keywords that are used for exception handling in Java. (2 Marks)

SECTION B [30 MARKS]

Answer any three questions on this section

12. a). Explain the following terms as used in programming. **(10 Marks)**

- i. Algorithm
- ii. Source code
- iii. Compiling
- iv. Debugging
- v. Object-oriented programming (OOP)

b). Explain five reasons why Java is preferred as a Programming Language.
(10 marks)

13. Use the following code to answer the questions that follow:

```
public class ThreeNumberAddition
{
    public static void main(String[] args)
    {
        int num1=6;
        num2=5;
        int num3 = 8
        sum = num1 + num2 + num3
        System.out.print("THE SUM OF THE THREE NUMBERS IS:" +sum);
    }
}
```

- i. Identify FOUR bugs in the code **(4 Marks)**
- ii. Re-write the code correctly **(6 Marks)**
- iii. Describe **variables**, and then explain any **Four** variable types as used in Java **(10 Marks)**

14. John is leading a software development project. To ensure the successful development of a program, He needs to explain the various phases that will be involved in the process.

- i. **Describe** the phases of program development **(10 Marks)**
- ii. Write a Java program to **display** your Admission Number, Your Full Name and Age. **(10 Marks)**

15. Briefly explain the following terms as used in Object Oriented Programming giving an example in each case. **(4 Marks)**

- i. Abstraction
- ii. Polymorphism
- iii. Using illustrations explain any three symbols used in a flow chart. **(6 marks)**
- iv. Use the Java Syntax below and explain each Line of Code. **(10 Marks)**

```
public class Main
{
    public static void main(String[ ] args)
    {
        System.out.println("Hello World");
    }
}
```