



PROGRAMMING IN JAVA

Assignment 01

TYPE OF QUESTION: MCQ

Number of questions: 10

Total marks: $10 \times 1 = 10$

QUESTION 1:

Which of the following is true?

- a. Java uses only interpreter.
- b. Java uses only compiler.
- c. Java uses both interpreter and compiler.
- d. None of the above.

Correct Answer:

- c. Java uses both interpreter and compiler.

Detailed Solution:

Creating a .class file from .java using javac command is a compilation task, whereas execution of a .class file using java is the process of interpretation.



QUESTION 2:

A Java file with extension '.class' contains

- a. Java source code
- b. HTML tags
- c. Java Byte code
- d. A program file written in Java programming language

Correct Answer:

- c. Java Byte code

Detailed Solution:

A .class file is a compiled version of the .java file in byte code (it is a kind of object code with JVM (Java Virtual Machine) as the target machine).



QUESTION 3:

Which of the following is not an object-oriented programming paradigm?

- a. Encapsulation
- b. Inheritance
- c. Polymorphism
- d. Dynamic memory allocation

Correct Answer:

- d. Dynamic memory allocation

Detailed Solution:

Dynamic memory allocation is a memory allocation strategy and not a programming paradigm.



QUESTION 4:

Java is a platform independent programming language because

- a. It compiles an intermediate code targeting a virtual machine, which can be interpreted by an interpreter for a given OS.
- b. The Java compiler translates the source code directly into the machine-level language.
- c. It follows the concept of “write once and compile everywhere”.
- d. It is written almost similar to the English language.

Correct Answer:

- a. It compiles to an intermediate code targeting a virtual machine, which can be interpreted by an interpreter for a given OS.

Detailed Solution:

The compiled code (byte code) can be executed (interpreted) on any platform running a JVM.



QUESTION 5:

Which of the following is not a Language Processor?

- a. Assembler
- b. Compiler
- c. Interpreter
- d. Fortran

Correct Answer:

- d. Fortran

Detailed Solution:

A computer understands instructions in machine code i.e., in the form of 0s and 1s. Special translators are required for this operation like Assembler, Compiler and Interpreter. Fortran is a programming language but not a language processor.



QUESTION 6:

A platform is the hardware or software environment in which a program runs. Which of the following is/are Java platform component(s)?

- a. HTML
- b. Java Virtual Machine
- c. Javascript
- d. HotJava

Correct Answer:

- b. Java Virtual Machine

Detailed Solution:

"A platform is the hardware or software environment in which a program runs. Some of the most popular platforms are Microsoft Windows, Linux, Solaris OS, and Mac OS. Most platforms can be described as a combination of the operating system and underlying hardware. The Java platform differs from other platforms as it is a software-only platform that runs on top of other hardware-based platforms.

The Java platform has two components:

The Java Virtual Machine

The Java Application Programming Interface (API)



QUESTION 7:

What is the correct sequence of steps to execute a Java program?

- I. Compile the Program: Use the javac command to compile the code into bytecode.
- II. Edit the Program: Write the code in a text editor or IDE.
- III. Run the Program: Use the java command to execute the bytecode.

Which of the following options represents this sequence?

- a. Run → Edit → Compile
- b. Edit → Run → Compile
- c. Compile → Edit → Run
- d. Edit → Compile → Run

Correct Answer:

- d. Edit → Compile → Run

Detailed Solution:

The Java development process involves writing code (Edit), converting it to bytecode (Compile), and then executing it on the JVM (Run).



QUESTION 8:

What is the primary difference between javac and java commands?

- a. javac is used to edit Java code, while java runs Java programs.
- b. javac compiles Java source code to bytecode, while java executes the bytecode on the JVM.
- c. javac executes Java programs, while java is used for compilation.
- d. Both are used for compiling Java programs.

Correct Answer:

- b. javac compiles Java source code to bytecode, while java executes the bytecode on the JVM.

Detailed Solution:

The javac command converts .java source files into .class bytecode files.

The java command executes the .class file using the Java Virtual Machine (JVM).



QUESTION 9:

Which of the following is not a feature of Java?

- a. Platform Independence
- b. Object-Oriented Programming
- c. Supports Explicit Pointers
- d. Supports Polymorphism

Correct Answer:

- c. Supports Explicit Pointers

Detailed Solution:

Java is platform-independent, object-oriented, and secure. It does not support explicit pointers, as they can lead to memory management issues and compromise security.



QUESTION 10:

What is the output of the following code?

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

- a. Hello, World!
- b. HelloWorld!
- c. Compilation Error
- d. Runtime Error

Correct Answer:

- a. Hello, World!

Detailed Solution:

Java program to print Hello, World!
