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SHRI BHAGUBHAI MAFATLAL POLYTECHNIC

Programme: Computer Engineering **Semester: III**

Course: Programming in JAVA **Course code: PRJ228914**

PT 1 – QUESTION BANK

1.	Describe primitive data types of java with appropriate code snippets.
2.	Define bytecode with brief description. OR describe "platform independent" feature in java. OR describe "portability" feature in java. OR describe bytecode with suitable example.
3.	Describe the following features in java(any 2)
	• Robust • Secure • Portable • Multithreaded • Architecture-neutral • Dynamic • Distributed • Interpreted & high performance • Simple • Object oriented
4.	Explain explicit type casting with suitable example program.
5.	Define the following terms with example.
	• Class • Object • Reference
6.	Describe the working of new operator in java. OR describe the process of creation of objects in java with suitable example.
7.	Explain parameterized constructor in with example program. OR explain constructor overloading.
8.	Explain 1D array(compile-time and run-time both) with example program.
9.	Explain 2D array(compile-time and run-time both) with example program.
10.	Explain passing and returning objects to and from the method (function) with example program.
11.	Explain static data and static member method with example program.
12.	Describe character/boolean/floating point numbers/integer with example.
13.	Explain how to take user input using scanner class.

14.	Explain arithmetic/logical/relational operator with example OR with example program
15.	Explain bitwise operator with example.
16.	Explain array of object with example. (or a program will be asked.)
16.	Describe call-by-value with suitable example program.
17.	Describe call-by-reference with suitable example program.
18.	Explain command line arguments with suitable example program.
19.	Describe the working of "this" with an example program
20.	Explain constructor chaining with example program
21.	Explain Static keyword with example
22.	Enlist different types of inheritance and Explain all with example program
23.	Explain final Keyword with example
24.	Explain Super Keyword with example
25.	Explain Method Overriding with example program
26.	Difference between class and object
27.	Difference between compile time polymorphism and run time polymorphism
28.	List reserved words in java
29.	define identifier& variables
30.	Difference between continue and break

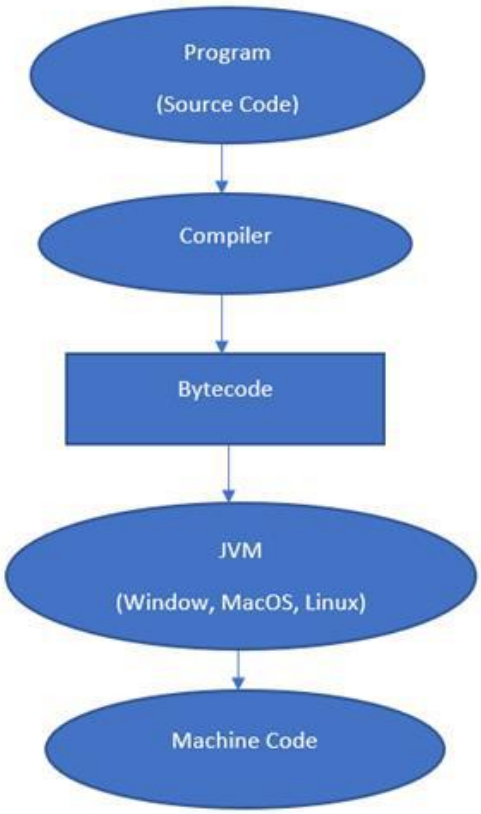
Q-2 Answer Define bytecode with brief description. OR describe "platform independent" feature in java.

Byte Code

Byte Code can be defined as an intermediate code generated by the compiler after the compilation of source code(JAVA Program). This intermediate code makes Java a platform-independent language.

How **is Byte Code** generated?

Compiler converts the source code or the Java program into the Byte Code(or machine code), and secondly, the Interpreter executes the byte code on the system. The Interpreter can also be called JVM(Java Virtual Machine). The byte code is the common piece between the compiler(which creates it) and the Interpreter (which runs it).



How is Java platform independent?

The meaning of Java platform-independent is that the Java compiled code(byte code) can run on all operating systems. A program is written in a language that is a human-readable language. It may contain words, phrases, etc which the machine does not understand. For the source code to be understood by the machine, it needs to be in a language understood by machines, typically a machine-level language. So, here comes the role of a compiler. The compiler converts the high-level language (human language) into a format understood by the machines.

Therefore, a compiler is a program that translates the source code for another program from a programming language into executable code. This executable code may be a sequence of machine instructions that can be executed by the CPU directly, or it may be an intermediate representation that is interpreted by a virtual machine. This intermediate representation in Java is the **Java Byte Code.**

Credits: 1. https://www.geeksforgeeks.org/byte-code-in-java/