MCQs BANK

Object Oriented Programming

Topic: Introduction

MCQs BANK No.: 1

Instructions:

This MCQs Bank contains question and solution on adjacent(even-odd) pages. First try to solve the MCQ by yourself, then look for the solution.

Best viewed in “single page view” in PDF viewer.

MCQ No: 1

The inclusion of property & method within a class/object in which it needs to function properly is called _____. Fill in the blank.

a) Encapsulation
b) Inheritance
c) Message Passing
d) Data Hiding

MCQ No: 1 (Solution)

Ans: a) Encapsulation

Explanation:

Encapsulation is the process by which the property & method is included in a class/object.

Encapsulation in Java is a mechanism of wrapping the data (variables) and code acting on the data (methods) together as a single unit. In encapsulation, the variables of a class will be hidden from other classes, and can be accessed only through the methods of their current class.

MCQ No: 2

_____ allows child classes to acquire the characteristics of existing parent class. Fill in the blank.

a) Inheritance
b) Encapsulation
c) Data Hiding
d) Message Passing

MCQ No: 2 (Solution)

Ans: a) Inheritance

Explanation: Inheritance allows child classes to acquire the characteristics of existing parent class.

Inheritance in Java is a mechanism in which one object acquires all the properties and behaviors of a parent object. The idea behind inheritance in Java is that you can create new classes that are built upon existing classes. When you inherit from an existing class, you can reuse methods and fields of the parent class.

MCQ No: 3

In _____ a class can inherit from several other classes. Fill in the blank.

a) Single inheritance
b) Multi-level inheritance
c) Multiple inheritance
d) None of these

MCQ No: 3 (Solution)

Ans: c) Multiple inheritance

Explanation:

Multiple inheritance is the type of inheritance where a class inherits properties from several other classes.

Multiple inheritance is a feature of some object-oriented programming languages(such as Java) in which an object or class can inherit characteristics and features from more than one parent object or parent class.

MCQ No: 4

An abstract class, which declared with the “abstract” keyword, cannot be instantiated. True or False?

a) True

b) False

MCQ No: 4 (Solution)

Ans: a) True

Explanation:

An abstract class, which declared with the "abstract" keyword, cannot be instantiated. This is because in abstract class the methods are declared only without defining them.

Abstract classes cannot be instantiated, but they can be sub classed.

MCQ No: 5

_____ means the ability to request that the same methods be performed by a wide range of different types of things. Fill in the blank.

a) Polymorphism
b) Data Hiding
c) Encapsulation
d) Inheritance

MCQ No: 5 (Solution)

Ans: a) Polymorphism

Explanation: Polymorphism in Java is a concept by which we can perform an action in different ways, by method overloading and method overriding.

Polymorphism means multiple forms, where a same method name can be used to perform different functions, by varying the arguments in type and number.

Polymorphism uses a same method to perform different tasks. This allows us to perform a single action in different ways.

MCQ No: 6

A _____ can inherit all its _____ attributes & methods besides having its own unique attributes & methods. Fill in the blanks.

a) Subclass, Superclass
b) Superclass, Subclass
c) Destructor, Constructor
d) Constructor, Destructor

MCQ No: 6 (Solution)

Ans: a) Subclass, Superclass

Explanation:

Superclass is the Base class or the Parent Class.

Subclass is the Derived class or the Child Class.

Subclass inherits all the properties of Superclass, along with its own data members and methods..

MCQ No: 7

_____ is an abstract machine. It is a specification that provides runtime environment in which java bytecode can be executed.

a) JDK (Java Development Kit)
b) JVM (Java Virtual Machine)
c) JRE (Java Runtime Environment)
d) None of these

MCQ No: 7 (Solution)

Ans: b) JVM (Java Virtual Machine)

Explanation:

Java Virtual Machine is an abstract machine. It is a specification that provides runtime environment in which java bytecode can be executed. This JVM gives platform independence of JAVA.

Java Virtual Machine (JVM) is a engine that provides runtime environment to drive the Java Code or applications. It converts Java bytecode into machines language. JVM is a part of Java Runtime Environment (JRE).

MCQ No: 8

The _____ is collection of programming tools. Fill in the blank.

a) JVM (Java Virtual Machine)
b) JDK (Java Development Kit)
c) JRE (Java Runtime Environment)
d) None of these

MCQ No: 8 (Solution)

Ans: b) JDK (Java Development Kit)

Explanation:

The Java Development Kit or JDK is collection of programming tools.
The Java Development Kit (JDK) is a software development environment used for developing Java applications and applets. It includes the Java Runtime Environment (JRE), an interpreter/loader (java), a compiler (javac), an archiver (jar), a documentation generator (javadoc) and other tools needed in Java development.

MCQ No: 9

_____ is the set of optimized instructions generated during compilation phase and it is more powerful than ordinary source code. Fill in the blank.

a) Bit code
b) Byte code
c) Machine code
d) None of these

MCQ No: 9 (Solution)

Ans: b) Byte code

Explanation: Java Byte code is the set of optimized instructions generated during compilation phase and it is more powerful than ordinary source code. Byte code is an intermediate code between the source code & machine code. It is a low-level code that is the result of the compilation of a source code which is written in a high-level language. It is processed by a virtual machine like Java Virtual Machine (JVM). Byte code is referred to as a Portable code.

MCQ No: 10

Out of the following which one is not correctly matched ?

a) JAVA - Object Oriented Language
b) FORTRAN - Object Oriented Language
c) C++ - Object Oriented Language
d) BASIC - Procedural Language

MCQ No: 10 (Solution)

Ans: b) FORTRAN - Object Oriented Language

Explanation:

FORTRAN (derived from Formula Translation) is a Procedural Programming Language that uses traditional way of calling functions and returning values. Originally developed by IBM in the 1950s for scientific and engineering applications.

MCQ No: 11

Consider the following 2 statements(S1 and S2).
(S1) C++ uses compiler only.
(S2) Java uses compiler and interpreter both.
Which of the following is correct.

a) S1 is TRUE and S2 is FALSE
b) S1 is FALSE and S2 is TRUE
c) Both S1 and S2 are TRUE
d) Both S1 and S2 are FALSE

MCQ No: 11 (Solution)

Ans: c) Both S1 and S2 are TRUE

Explanation:

C++ uses compiler only. There is no use of interpreter in C++ executable code.

Java uses compiler and interpreter both. Java Compiler converts the Java Source Code into intermediate code (known as the Byte code). This Byte Code is interpreted by JVM.

MCQ No: 12

Object Oriented Programming Language follows _____ approach of Program Execution. Fill in the blank.

a) Top Down
b) Bottom Up
c) Random
d) Dynamic

MCQ No: 12 (Solution)

Ans: b) Bottom Up

Explanation:

The top-down approach focuses on breaking down a big program into smaller procedures(functions) or modules. Procedural Programming Languages use top-down approach.

Object-oriented language such as C++ or java uses a bottom-up approach where each object is identified first. After that, make decisions about reusable low-level utilities then decide how there will be put together to create high-level construct.

MCQ No: 13

Consider the following 2 statements (S1 and S2).
(S1)Java is platform independent.
(S2)C++ is platform dependent.
Which of the following is correct.

a) S1 is TRUE and S2 is FALSE
b) S1 is FALSE and S2 is TRUE
c) Both S1 and S2 are TRUE
d) Both S1 and S2 are FALSE

MCQ No: 13 (Solution)

Ans: c) Both S1 and S2 are TRUE

Explanation:

Java Compiler converts the Java Source Code into intermediate code (known as the Byte code). This Byte Code is interpreted by JVM. The Byte Code can be executed on any platform where JVM is present.

C++ uses compiler to generate Machine dependent executable code.

MCQ No: 14

Which of the following is not a Java features?

a) Dynamic
b) Architecture Neutral
c) Use of pointers
d) Object-oriented

MCQ No: 14 (Solution)

Ans: c) Use of pointers.

Explanation:

Java does not have any concept of pointers.

Java has references. It's a fine point, but a pointer has extra operations that you may (or may not) typically use; a reference lacks these operations because the operations may be unsafe.

MCQ No: 15

Which of the following tool is used to generate API documentation in HTML format from doc comments in source code?

a) javap tool
b) javaw command
c) Javadoc tool
d) javah command

MCQ No: 15 (Solution)

Ans: c) Javadoc tool

Explanation: Javadoc tool of JDK is used to generate API(Application Program Interface) documentation in HTML format from doc comments in source code.

Javadoc is a documentation generator created by Sun Microsystems for the Java language for generating API documentation in HTML format from Java source code. The HTML format is used for adding the convenience of being able to hyperlink related documents together.

MCQ No: 16

In which memory a String is stored, when we create a string using new operator?

a) Stack
b) String memory
c) Heap memory
d) Random storage space

MCQ No: 16 (Solution)

Ans: c) Heap memory

Explanation:

Heap Memory is the free memory of RAM which is used to store any variables, objects declared during program execution.

Heap memory is the run time data area from which the memory for all java class instances and arrays is allocated. The heap is created when the Java Virtual Machine starts up and may increase or decrease in size while the application runs.

MCQ No: 17

Which keyword is used for accessing the features of a package?

a) package
b) import
c) extends
d) export

MCQ No: 17 (Solution)

Ans: b) import

Explanation:

import keyword is used to import or add packages in Java Program.
It declares a Java class to use in the code below the import statement.
Once a Java class is declared, then the class name can be used in the code without specifying the package the class belongs to.

Example:

```
import java.lang.*;
```

MCQ No: 18

Which of the following is NOT an Object Oriented Programming Language?

a) C
b) JAVA
c) C#.NET
d) VB.NET

MCQ No: 18 (Solution)

Ans: a) C

Explanation:
C is NOT Object Oriented Programming Language, it is Procedural Programming Language.

All the others are Object Oriented Programming Language.

MCQ No: 19

Which of the following statements is NOT TRUE about Java.

a) Everything is an object in Java.
b) There is no "goto" statement in Java.
c) Java support destructors.
d) Java does not support conditional compile (#ifdef / #ifndef type).

MCQ No: 19 (Solution)

Ans: c) Java support destructors.

Explanation: In Java, when we create an object of the class it occupies some space in the memory (heap). If we do not delete these objects, it remains in the memory and occupies unnecessary space that is not upright from the aspect of programming.
There are no destructors in Java, Java provides automatic garbage collection and hence destructors are not required in Java. The garbage collector is a program (thread) that runs on the JVM. It automatically deletes the unused objects (objects that are no longer used) and free-up the memory. The programmer has no need to manage memory, manually.

MCQ No: 20

"To represent the essential feature without representing the back ground details" is known as _____. Fill in the blank.

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

MCQ No: 20 (Solution)

Ans: b) Abstraction

Explanation:

Abstraction is "To represent the essential feature without representing the back ground details."

Abstraction lets us focus on what the object does instead of how it does it.