Ques.1 Why Java is called as platform independent?

Ans. Java is called platform independent because of its byte codes which can run on any system irrespective of its underlying operating system. Any java code internally converted in to its byte code.

Ques.2 Is Java code 100% object orineted?

Ans. No it is not 100% object oriented language as it makes use of eight primitive data types like boolean, byte, char, int, float, double, long, short which are not objects

Ques.3 What is the difference between equals() method and == operator in Java?

Ans. equals() method is defined in Object class in Java and used for checking equality of two objects.

“==” or equality operator in Java is a binary operator provided by Java programming language and used to compare primitives and objects.

Ques.4 What difference between heap and stack memory?

Ans. Stack memory only contains local primitive and reference variables to objects in heap space.Stack memory is used only by one thread of execution. Whenever an object is created, it’s always stored in the Heap space in heap memory.Heap memory is used by all the parts of the application

Ques.5 Why the concept of pointers are not used in Java?

Ans. Because they are unsafe and increases the complexity of the program. As, Java is known for its simplicity of code, adding the concept of pointers will be contradicting. Moreover, since JVM is responsible for implicit memory allocation, thus in order to avoid direct access to memory by the user, pointers are not introduced in Java.

Ques.6 Why Strings are immutable in Java?

Ans. String objects are immutable as String objects are generally cached in the String pool. Since String literals are usually shared between multiple clients, action from one client might affect the rest. It gives security, caching, synchronization, and performance of the application.

Ques.7 What are the advantages of packages in Java?

Ans. Packages help in avoiding name clashes

They provide easier access control on the code

Packages can also contain hidden classes which are not visible to the outer classes and only used within the package

Creates a proper hierarchical structure which makes it easier to locate the related classes

Ques.8 What is multiple inheritance? Is it supported by Java?

Ans. If a child class inherits the property from multiple classes is known as multiple inheritance. Java does not allow to extend multiple classes.The problem with multiple inheritance is that if multiple parent classes have the same method name, then at runtime it becomes difficult for the compiler to decide which method to execute from the child class. This problem is resolved in interface.

Ques.9 Is it possible to restrict inheritance ?

Ans. Yes, it is. You can restrict Inheritance by:

a. Using the final keyword.

b. Making the method final.

c. Using private constructor.

d. Using (//) Javadoc comment.

Ques.10 what is use of this keyword?

Ans. In a constructor if I have declared local variable as well as instance variable with same name then this keyword is been used.

Ques.11 What is effect of using Final keyword in java?

Ans.

Final keyword in java is used to restrict usage of variable, class and method.Variable: Value of Final variable is constant, you can not change it.

Method: you can’t override a Final method.

Class: you can’t inherit from Final class

Ques.12 When is the super keyword used?

Ans. Super is used to refer:immediate parent class constructor,

immediate parent class variable,

immediate parent class method

Ques.13 Can we execute any code, even before the main method?

Ans. Yes, we can execute any code, even before the main method.

Ques.14 Are constructors inherited?

Ans. We cannot inherit a constructor.

Ques.15 Is it possible to generate array volatile in Java ?

Ans. Yes, you can generate an array volatile in Java but then again only the situation which is directing to an array, not the entire array

Ques.16 What happens when an exception is thrown by the main method?

Ans. When an exception is thrown by the main() method, Java Runtime terminates the program and print the exception message and stack trace in system console.

Ques.17 What is the purpose of garbage collection in Java, and when is it used?

Ans. The purpose of garbage collection is to identify and discard objects that are no longer needed by a program so that their resources can be reclaimed and reused.

Ques.18 What is the main difference between Java platform and other platforms?

Ans. The Java platform differs from most other platforms in the sense that it's a software-based platform that runs on top of other hardware-based platforms.It has two components:

1. Runtime Environment
2. API(Application Programming Interface)

Ques.19 What is difference between object oriented programming language and object based programming language?

Ans. Object based programming languages follow all the features of OOPs except Inheritance.

Examples of object based programming languages are JavaScript, VBScript etc.

Ques.20 What is constructor?

Ans. Constructor is just like a method that is used to initialize the state of an object. It is invoked at the time of

object creation.

Ques.21 What is the purpose of default constructor?

Ans. The default constructor provides the default values to the objects. The java compiler creates a default constructor only if there is no constructor in the class.

Ques.22 What is static method?

Ans. A static method belongs to the class rather than object of a class.

• A static method can be invoked without the need for creating an instance of a class.

• static method can access static data member and can change the value of it.

Ques.23 Why main method is static?

Ans. because object is not required to call static method if It were non-static method,jvm creats object first then call main() method that will lead to the problem of extra memory allocation.

Ques.24 What is static block?

Ans. • Is used to initialize the static data member.

• It is executed before main method at the time of classloading.

Ques.25 What is Inheritance?

Ans. Inheritance is a mechanism in which one object acquires all the properties and behaviour of another object of another class.

It represents IS-A relationship.

It is used for Code Resusability and Method Overriding.

Ques.26 Why multiple inheritance is not supported in java?

Ans. To reduce the complexity and simplify the language, multiple inheritance is not supported in java in case of class.

Ques.27 What is composition?

Ans. Holding the reference of the other class within some other class is known as composition.

Ques.28 What is difference between aggregation and composition?

Ans. Aggregation represents weak relationship whereas composition represents strong relationship.
For example: bike has an indicator (aggregation) but bike has an engine (compostion).

Ques.29 Why Java does not support pointers?
Ans. Pointer is a variable that refers to the memory address.
They are not used in java because they are unsafe(unsecured) and complex to understand.

Ques.30 What is method overloading?

Ans. If a class have multiple methods by same name but different parameters, it is known as Method Overloading. It increases the readability of the program.

Ques.31 Why method overloading is not possible by changing the return type in java?

Ans. Because of ambiguity.

Ques.32 What is difference between abstract class and interface?

Ans. 1)An abstract class can have method body (nonabstract methods). Interface have only abstract methods.
2)An abstract class can have instance variables. An interface cannot have instance variables.
3)An abstract class can have constructor . Interface cannot have constructor .
4)An abstract class can have static methods. Interface cannot have static methods. 5)You can extends one abstract class. You can implement multiple interfaces.

Ques.33 What is difference between Checked Exception and Unchecked Exception? 1)Checked Exception

Ans. The classes that extend Throwable class except RuntimeException and Error are known as checked exceptions
e.g.IOException,SQLException etc. Checked exceptions are checked at compile-time.

Ques.34 Is it necessary that each try block must be followed by a catch block?

Ans. It is not necessary that each try block must be followed by a catch block. It should be followed by either a catch block OR a finally block. And whatever exceptions are likely to be thrown should be declared in the throws clause of the method.

Ques.35 What is difference between throw and throws?

Ans. throw is used to explicitly throw an exception. throws is used to declare an exception.
1)checked exceptions can not be propagated with throw only. checked exception can be propagated with throws. used to declare an explicitly exception. throw an exception.
2)checked exceptions can not be propagated with throw only. checked exception can be propagated with throws.
3)throw is followed by an instance. throws is followed by class.
4)throw is used within the method. throws is used with the method signature. 5)You cannot throw multiple exception You can declare multiple exception e.g. public void method()throws IOException,SQLException.

Ques.36 What is exception propagation ?

Ans. Forwarding the exception object to the invoking method is known as exception propagation. There is given a list of string handling interview questions with short and pointed answers. If you know any string handling interview question, kindly post it in the comment section.

Ques.37 What is the meaning of immutable in terms of String?
Ans. The simple meaning of immutable is unmodifiable or unchangeable. Once string object has been created, its value can’t be changed.

Ques.38 Why string objects are immutable in java?

Ans. Because java uses the concept of string literal. Suppose there are 5 reference variables,all referes to one object “sachin”.
If one reference variable changes the value of the object, it will be affected to all the reference variables. That is why string objects are immutable in java.

Ques.39 What is difference between final, finally and finalize?

Ans. final: final is a keyword, final can be variable, method or class.
You, can’t change the value of final variable, can’t override final method, can’t inherit final class.
finally: finally block is used in exception handling. finally block is always executed.
finalize(): finalize() method is used in garbage collection.finalize() method is invoked just before the object is garbage collected.The finalize() method can be used to perform any cleanup processing.

Ques.40 What is serialization?

Ans. Quite simply, object serialization provides a program the ability to read or write a whole object to and from a raw byte stream. It allows Java objects and primitives to be encoded into a byte stream suitable for streaming to some type of network or to a file-system, or more generally, to a transmission medium or storage facility. A seralizable object must implement the Serilizable interface. We use ObjectOutputStream to write this object to a stream and ObjectInputStream to read it from the stream.

Ques.41 Why there are some null interface in java ? What does it mean ? Give me some null interfaces in JAVA?

Ans. Null interfaces act as markers.they just tell the compiler that the objects of this class need to be treated differently.
some marker interfaces are : Serializable, Remote, Cloneable

Ques.42 Is synchronised a modifier?indentifier?what is it??
Ans. It's a modifier.
Synchronized methods are methods that are used to control access to an object. A thread only executes a synchronized method after it has acquired the lock for the method's object or class.

Synchronized statements are similar to synchronized methods. A synchronized statement can only be executed after a thread has acquired the lock for the object or class referenced in the synchronized statement.

Ques.43 What is singleton class?where is it used?

Ans. Singleton is a design pattern meant to provide one and only one instance of an object. Other objects can get a reference to this instance through a static method (class constructor is kept private). Why do we need one? Sometimes it is necessary, and often sufficient, to create a single instance of a given class. This has advantages in memory management, and for Java, in garbage collection. Moreover, restricting the number of instances may be necessary or desirable for technological or business reasons-

for example, we may only want a single instance of a pool of database connections.

Ques.44 What is a compilation unit?

Ans. The smallest unit of source code that can be compiled, i.e. a .java file.

Ques.45 Is string a wrapper class?

Ans. String is a class, but not a wrapper class. Wrapper classes like (Integer) exist for each primitive type. They can be used to convert a primitive data value into an object, and viceversa.

Ques.46 Why java does not have multiple inheritance?

Ans. The Java design team strove to make Java:

• Simple, object oriented, and familiar

• Robust and secure

• Architecture neutral and portable

• High performance

• Interpreted, threaded, and dynamic

The reasons for omitting multiple inheritance from the Java language mostly stem from the "simple, object oriented, and familiar" goal. As a simple language, Java's creators wanted a language that most developers could grasp without extensive training. To that end, they worked to make the language as similar to C++ as possible (familiar) without carrying over C++'s unnecessary complexity (simple). In the designers' opinion, multiple inheritance causes more problems and confusion than it solves. So they cut multiple inheritance from the language (just as they cut operator overloading). The designers' extensive C++ experience taught them that multiple inheritance just wasn't worth the headache.

Ques.47 Why java is not a 100% oops?

Ans. Many people say this because Java uses primitive types such as int, char, double. But then all the rest are objects. Confusing question..

Ques.48 What is transient variable?

Ans. Transient variable can't be serialize. For example if a variable is declared as transient in a Serializable class and the class is written to an ObjectStream, the value of the variable can't be written to the stream instead when the class is retrieved from the ObjectStream the value of the variable becomes null.

Ques.49 Is Iterator a Class or Interface? What is its use?

Ans. Iterator is an interface which is used to step through the elements of a Collection.

Ques.50 What is similarities/difference between an Abstract class and Interface?

Ans. Differences are as follows:

• Interfaces provide a form of multiple inheritance. A class can extend only one other class.

• Interfaces are limited to public methods and constants with no implementation. Abstract classes can have a partial implementation, protected parts, static methods, etc.

• A Class may implement several interfaces. But in case of abstract class, a class may extend only one abstract class.

• Interfaces are slow as it requires extra indirection to to find corresponding method in in the actual class.

Abstract classes are fast. Similarities:

• Neither Abstract classes or Interface can be instantiated.

Ques.51 What is a transient variable?

Ans. A transient variable is a variable that may not be serialized.

Ques.52 What is synchronization and why is it important?

Ans. With respect to multithreading, synchronization is the capability to control the access of multiple threads to shared resources. Without synchronization, it is possible for one thread to modify a shared object while another thread is in the process of using or updating that object's value. This often leads to significant errors.

Ques.53 Can a lock be acquired on a class?

Ans. Yes, a lock can be acquired on a class. This lock is acquired on the class's Class object..

Ques.54 How does Java handle integer overflows and underflows?

Ans. It uses those low order bytes of the result that can fit into the size of the type allowed by the operation.

Ques.55 What is the Vector class?

Ans. The Vector class provides the capability to implement a growable array of objects

Ques.56 What modifiers may be used with an inner class that is a member of an outer class?

Ans. A (non-local) inner class may be declared as public, protected, private, static, final, or abstract.

Ques.57 What is the difference between the >> and >>> operators?

Ans. The >> operator carries the sign bit when shifting right. The >>> zero-fills bits that have been shifted out.

Ques.58 Which method of the Component class is used to set the position and size of a component?

Ans. setBounds() is the method of the Component class is used to set the position and size of a component.

Ques.59 Which java.util classes and interfaces support event handling?

Ans. The EventObject class and the EventListener interface support event processing.

Ques.60 Does garbage collection guarantee that a program will not run out of memory?

Ans. Garbage collection does not guarantee that a program will not run out of memory. It is possible for programs to use up memory resources faster than they are garbage collected. It is also possible for programs to create objects that are not subject to garbage collection

Ques.61 What restrictions are placed on the location of a package statement within a source code file?

Ans. A package statement must appear as the first line in a source code file (excluding blank lines and comments).

Ques.62 Can an object's finalize() method be invoked while it is reachable?

Ans. An object's finalize() method cannot be invoked by the garbage collector while the object is still reachable. However, an object's finalize() method may be invoked by other objects.

Ques.63 Name three Component subclasses that support painting?

Ans. The Canvas, Frame, Panel, and Applet classes support painting

Ques.64 What value does readLine() return when it has reached the end of a file?

Ans. The readLine() method returns null when it has reached the end of a file.

Ques.65 What is the immediate superclass of the Dialog class?

Ans. window is the immediate superclass of the Dialog class.

Ques.66 What are order of precedence and associativity, and how are they used?

Ans. Order of precedence determines the order in which operators are evaluated in expressions. Associatity determines whether an expression is evaluated left-to-right or right-to-left

Ques.67 What is the catch or declare rule for method declarations?

Ans. If a checked exception may be thrown within the body of a method, the method must either catch the exception or declare it in its throws clause.

Ques.68 What is the difference between a MenuItem and a CheckboxMenuItem?

Ans. The CheckboxMenuItem class extends the MenuItem class to support a menu item that may be checked or unchecked.

Ques.69 Can an anonymous class be declared as implementing an interface and extending a class?

Ans. An anonymous class may implement an interface or extend a superclass, but may not be declared to do both.

Ques.70 What is the purpose of finalization?

Ans. The purpose of finalization is to give an unreachable object the opportunity to perform any cleanup processing before the object is garbage collected.

Ques.71 What is the difference between the Boolean & operator and the && operator?

Ans. If an expression involving the Boolean & operator is evaluated, both operands are evaluated. Then the & operator is applied to the operand. When an expression involving the && operator is evaluated, the first operand is evaluated. If the first operand returns a value of true then the second operand is evaluated. The && operator is then applied to the first and second operands. If the first operand evaluates to false, the evaluation of the second operand is skipped.

Ques.72 What is the purpose of the Runtime class?

Ans. The purpose of the Runtime class is to provide access to the Java runtime system

Ques.73 How many times may an object's finalize() method be invoked by the garbage collector?

Ans. An object's finalize() method may only be invoked once by the garbage collector.

Ques.74 What is the purpose of the finally clause of a try-catchfinally statement?

Ans. The finally clause is used to provide the capability to execute code no matter whether or not an exception is thrown or caught.

Ques.75 What is the difference between a break statement and a continue statement?

Ans. A break statement results in the termination of the statement to which it applies (switch, for, do, or while). A continue statement is used to end the current loop iteration and return control to the loop statement.

Ques.76 What is an abstract method?

Ans. An abstract method is a method whose implementation is deferred to a subclass.

Ques.77 What is the difference between a static and a nonstatic inner class?

Ans. A non-static inner class may have object instances that are associated with instances of the class's outer class.

A static inner class does not have any object instances.

Ques.78 What is an object's lock and which object's have locks?

Ans. An object's lock is a mechanism that is used by multiple threads to obtain synchronized access to the object.

A thread may execute a synchronized method of an object only after it has acquired the object's lock. All objects and classes have locks.

A class's lock is acquired on the class's Class object.

Ques.79 What is the difference between a Window and a Frame?

Ans. The Frame class extends Window to define a main application window that can have a menu bar.