Q.1) what is the difference beth JDK, JRE & JVM.

	JDK.	JRE.	JVM.
① full form.	- Java Developement kit.	- Java runtime environment.	- Java virtual mic.
② Defⁿ	- It is a software developement kit used to develop applⁿ in java	- It's a software bundle that provides java class libaries with the heressary components to run java code.	- It's an abstract mic that provide & environment to run & execute java byte code
③ Contain	- It contain tools for developing debugging & monitoring java code.	- It contains class libraries & other supporting files that the JVM requires to execute the program.	- software developement tools are not included in the JVM.
④ Enables	- JDK enables developer's to create java program that can be executed & run by the JRE & JVM.	- The JRE is the part of the JDK of the JDK that create the JVM	- It is the java ~~se~~ platform component that execute source code.
⑤ Architecture	superset	subset	subset.

Q.2) what is JIT complier.

→ JIT stands for Java-In-Time complier. JIT is a part of the JVM that optimizes the perform once of the application. It also known as dynamic compilation.

Q.3) ~~Class~~ what is the class loaders?

→ Java class loader is an abstract class. It belong to java.lang package. It loads classes. From different resources at run time. classes are loaded into the JVM according to need. if a loaded class depends on another class, that class is loaded as well.

Q4) Explain various memory logical partition:-

1. A logical partition is the division of a computer memory & storage into multiple sets of resources so that each set of resources can be operated ~~idea~~ independently with it's own operating system instance & Appln.
2. The No. of logical partitions are used for different purpose such as database operative or client server operation or the seperate test & production environment.
3. Each partition can communicate with the other partition as if other partitions is in a separate machine.

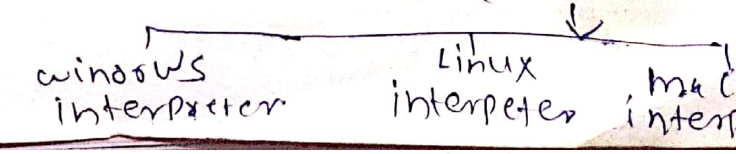
Q.5) what gives java it's write once & run anywhere nature?

→ ① Java application are called WORA i.e. (write once & run anywhere)

② This meanse programmer's can develop java code on one system & can expect it to run on any other.

③ Java enabled system without any adjustment This is all possible because of JVM.

JAVA program → Java compiler → Byte code (.class file)



④ In Java, the program is not converted to code directly understood by Hardware, rather it is converted to 'bytecode' (.classfile), which is interpreted by JVM. So once complied it generate bytecode file, which can be run anywhere (any m/c) which has JVM & hence it gets the native of 'write once & run anywhere'.

Q.6) Explain the history of Java. Who invented Java?

→ ① History of Java starts with 'Green Team'.

② The principle for creating Java programing were "simple, Robust, portable, platform independent, secured, "high performance ③ mobile device games, e-bussiness ~~④~~ stand alone it is used in Java.

④ James Gosling, Mike Sheridan, Patrick, Naughton initiated Java language project in June 1991. These small team of Sun microsystem engineers called "Green Team" & Now it owned by Oracle company & official owner of Java language.

⑤ James Gosling (father of Java.) → embedded system like set top boxes. → Green talk (.gt). ↓ Oak Renamed ← Silk Renamed. ← Java (Renamed) in 1995

Q.7) What is the original Name of Java & why it was rename?

→ ① The original name was 'oak' ~~which~~ which was developement by a small team of engineer working for 'Sun microsystem'.

② They called themself the 'Green Team'.

③ The 'oak' name was renamed due to the fact that oak was already ~~re~~ registered as part of another trade work.

Q.8) List features of Java.

→ ① The following are advantage of Java.

(A) - simple
- rules & syntax of Java are based on the C & C++ language
- The confusing & ambiguous concept of C++ are either left out in Java & they are reimplemented cleanarway.

eg: pointer & operator overloading are not these in Java but were an important part of C++.

(B) object oriented.
- Java can be easily extended as it is based of object model.
- It contain class, object, inheritance, polymorphism, abstraction, Encapsulation.

(C) Robust:-
- Java improved were memory management & mishandled exception by introducing automatic Garbage collector & exception Handling.

(D) platform independent:-
- Java program → Byte code → linux os / windows os / mac os.
- Java is write once & run anywhere language
- on compilation Java program is compiled into bytecode. This bytecode is platform independent & can be run on any m/c & this bytecode format also provide security.
- Any m/c having JVM can run Java program /bytecode.

E) Secure:-
- It enables us to develop virous free temper free system

- Java Program always runs in JRE with almost null interallition with system OS, hence it is more secure.

f) multi threading :-
- multiple task of program runs simultaneously.
- It uses same memory & other resources to execute multiple thread at the same time, like while typing grammatical error are checked along.

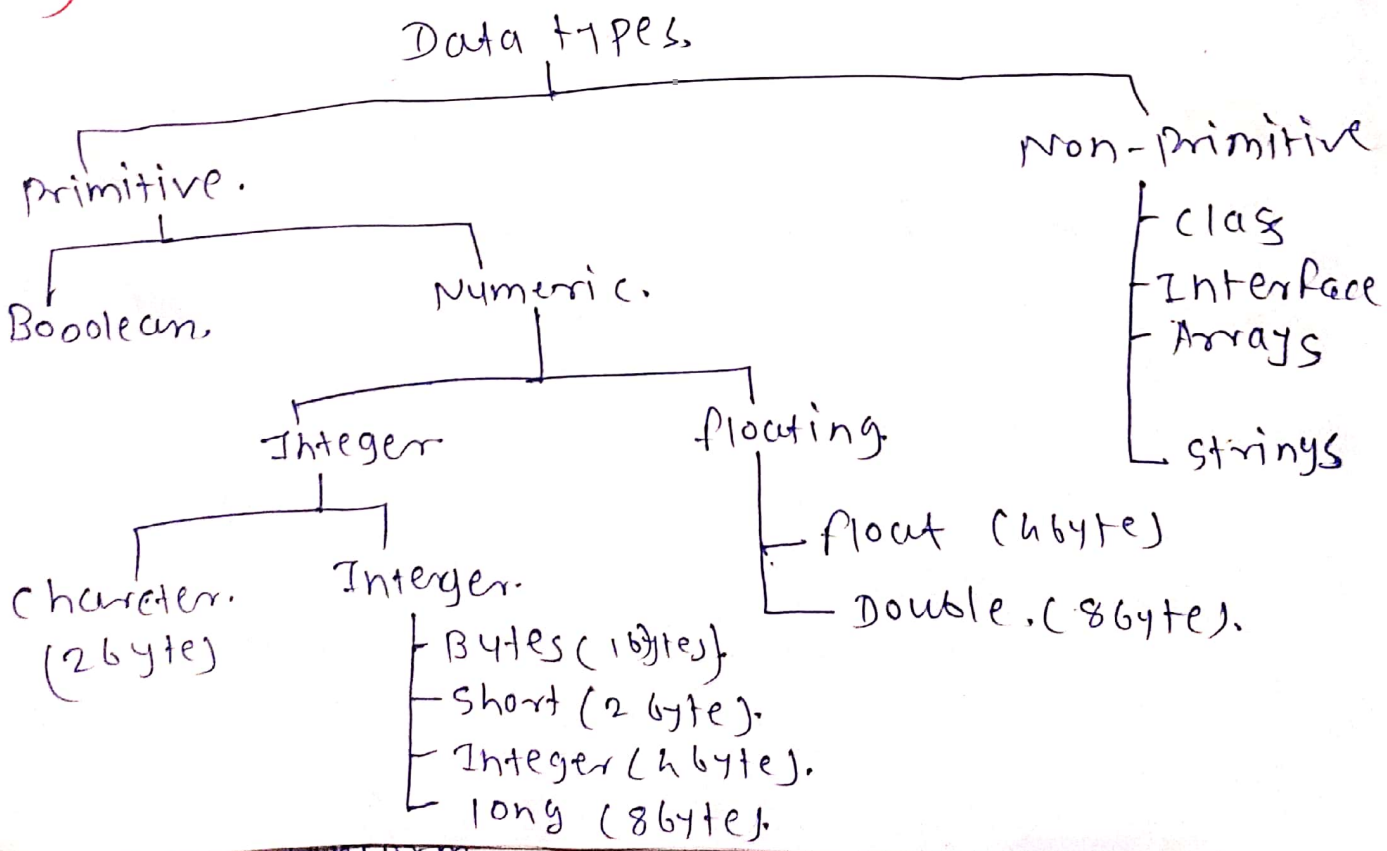
g) Architectural Neutral → Java bytecode runs on any computer architectures & hence it is easy to interpreter

h) portable :-
- Java is an interpreted language hence it increase it's speed of execution using just in time compiler

i) High performance :-
- Java is an interpreted language language hence it increase it's speed of execution using just in time compiler.

j) Distributed :-
- programs can be designed to run on computers networks. Java has a special class library for communication on network using TCP/IP protocols
- creating network connection is very much easy as compare to C/C++.

Q.9) List various Datatypes of Java.



Q.10) what is difference beth.

→ ① system.out.print
- The control or cursor remains on the same line after printing.

② system.out.println().
- The control/cursor moves to the next line after printing.

③ System.err.print()
- system.err.print() is used to display error message.
- output display in red colour

Q.11) How is Java platform independent.

→ 1. When the compile java program using javac compiler it generates bytecode.
2. we can execute the bytecode in any platform which has ~~execute the~~ JDK installed ie. Java developement kit.
3. with the help of JVM which is present in JDK the Java bytecode is translated into m/c understandable code.
4. Here, Java is platform ~~indenpent~~ independent but it is purely depended on JDK.

Q.12) what is bytecode ? ~~wh~~ How it is different from m/c code.

→ Bytecode.

Java program (source code) → Java complier → Java Byte code.

1. Bytecode is a set of command that is suited for software translation operation
2. Commonly know as p-code due to parameter ability that is provides.
3. It is a ~~inter~~ intermediate code compiled into a low level code from the source code for efficient executions by a software interpreter

Byte code

① It is an intermediate code designed to run on a virtual m/c instead of CPU.

② The bytecode is to the a format that can be executed efficiently by the virtual machines interpreter

③ It is platform independent because it can be executed on any platform using the virtue m/c.

m/c cod.

① It is computer programs made up of the native instructions associated with that particular computer

② machine code is the language which all programs must be converted into before they can be run.

③ It is not platform independent meaning it cannot be run on just any platform with the same operating system.

Q.B] what is diff. beth JAR file & Runnable Jar file.

Jar file.

① Jar file is a Java application which reqire a command line to run, a runnable JAR file can be directly executed by double clicking.

② A Jar is a package file format typically used to aggregate many java class files associated metadata resources into one file to distribute Appln software or libraries on the Java Platform.

Runnable Jar file.

① Runnable Jar file allows user to run Java classes without having to know class names & type them in cmd rather than user can just double click on the jar file & the program will fire up.

② A runnable jar allow Java classes to be loaded just like when a user click on exe file.

Q.14] Difference betn runable jar & exe file.

Runable jar file.	exe file.
1. Jar file are like dead. God.	① executable file are like living thing. eg. men.
2. Jar file is the combination of compiled Java classes.	② Executable jar file is also combination of compiled java classes with main class.

15] How is C platform dependent language

→ ① C. is a portable programming language because it is not tied to any hardware of system

② we can say, it is a harware indenent language of platform indenent language

③ That is why C is called 'portable language.

④ C Programs does not depend on ~~bottom~~ actually, the exe executable file that is generates at the end for running the C-program many dependent on a platform.

⑤ when you use as you get other extension for executable files.

Q.16] what is the difference path & class path?

Path.	class Path.
① Path variable is used to set the path for all Java software tools. like Java.exe, javac.exe, javadoc.exe & so on.	① class path variable is used to set the path for Java classes.

② variablename:- path.
variable value:-
C:\Program Files\
Java\Jdk\7.02\bin.

① variablename - classpath
variable value:-
C:\Program Files\Java
\jre1.6.0\jre\lib\
rt.jar