1) what is java?

Java is a high level programming language which follows oops principle like encapsulation , inheritance , polymorphism , abstraction

2) Explain all the java features in one or two lines.
   - **Simple** : Because it does not have complex features like Operator overloading, Multiple inheritance, pointers and Explicit memory allocation.
   - **Object Oriented language** : This is a way of organizing programs as collection of objects.
   - **Platform Independent** : java source code will be converted to byte code which is only understandable by JVM , byte code is an intermediate language which can be used to run the code in different platforms and byte code will be converted to exe file , hence java is **platform independent** but **jvm dependent**.
   - **Portable** : java follows WORA principle which means Write Once Run Anywhere , we can wirte code in particular system and can run in another system.
   - **Distributed** : we can create distributed applications using java.
   - **Secure** : We don't have pointers and we cannot access out of bound arrays in java.
   - **Robust** : Garbage collection, Exception Handling and memory allocation makes java
   - robust
   - **Multithread** : java supports multithreading by executing more than one task simultaneously
   - **Strongly-typed programming language :** the types of the used variables must be pre-defined and conversion to other objects is relatively strict

3) In which folder can we find the javac,java,javah,javarmi commands?

Ans : Bin folder.

4) what all the environment variables to set to run the java programs through command prompt?

Ans : Environment variable : path , system variable

5) what are the rules of naming the class
   - class name must start with upper camel case letter ,
     - one word : first letter must be in uppercase
     - multiple words : first letter of each word should be in uppercase
   - special characters are not allowed except $ and _
   - we can start class name with $ _ but its not recommended in real time

6) which is the main entry point of java program
   main methoad
   public static void **main**(String[] args)

7) components of java program are?
   Class , object , variables , methods , packages.

8) what is jvm,jre,jdk?
   - JVM : java virtual machine runs the program by using class, libraries and files provided by JRE
   - JRE: JRE is the environment within which the java virtual machine runs. JRE contains Java virtual Machine(JVM), class libraries, and other files excluding development tools such as compiler and debugger. Which means you can run the code in JRE but you can't develop and compile the code in JRE.
   - JDK: JDK is a superset of JRE, it contains everything that JRE has along with development tools such as compiler, debugger etc.
9) Explain the components of compile time environments and run time environments.
   - Components of compile time environments :
     - Source file : which consists source code (eg:java code)
     - Compiler : the one which converts souce code into machine code , or byte code ,compiler checks the syntax and semantic convention .
     - Class file : which consist of byte code produced by java compiler.
   - Components of run time environments :
     - Execution engine
     - JIT compiler : just in time compiler which enhances proformance
     - Class loader : loads all the classes
     - Byte code verifier
     - Java API

10) what is JIT?
    Ans : Just in time compiler :optimizes the performance of the application.

11) different types of memory in jvm.
    - Method area
    - Heap area
    - Stack area
    - Pc registers
    - Native method stack

12) In which area .class is stored?
    Ans : Method area

13) In which area object are stored?
    Ans : Heap area

14) Why do we call as java simple?
    Ans : because java does not have pointers , multiple inheritance , operator overloading , explicit memory allocation.
15) Why java is platform independent explain?

Ans : java source code will be converted to byte code which is only understandable by JVM , byte code is an intermediate language which can be used to run the code in different platforms and byte code will be converted to exe file , hence java is **platform independent** but **jvm dependent.**

16) Is jvm platform dependent?
    Ans : yes , jvm is platform dependent.

17) Is java case sensitive?
    Ans : yes , java is case sensitive language.

18) Is java complete object Oriented programming language?
    Ans : No , because java uses primitive data types.