中	Explain the components of the Jok.
_	THE JAVA DEVELOPMENT ICET (JDK) is a ROFTWARP
	development environment used to develop your
_	major component are
	1. Tava Compiler (Javac)
	Java compiler is a key component of JOK that
	tranfers sava source code to byte code
	2. JAVA VITUAl Machine (JVM).
	- Java virtual Marline is the running engine that.
	execute Tava byte codo,
	g Tava Runtime Environment (IRE)
	- The JAVA punninge formironment is a subset of
	JDK that includes the sym and exental class.
	libraries.
	more add enough hards actively and a settle
2.	Difference. Between JDK, TRE, and JVM.
7	JDK: The JOK is a software development kit that.
uc l	develops applications in Java.
	IN THE PARTY OF A STATE OF THE PROPERTY OF THE PARTY OF T
	TRU: The Java funtime forvivonment is an implementa
	of Jum. It is a type of package that provider class.
	libraries of gard, JVM, and other components.
	The state of the s
	svm:- The JVM is a platform independent abstract machine that has three notions in the form of .  specifications.
1	machine that my tries it offer the
-	greeifications.



3. what is the role of the JVM in JAVA? How does the JVM executes. Java code?

The role of IVM in java is that it enables a computer to run java programe at wett at programs. I was code in first compiled to byte code and then generates a class fice then the Tava Without equalities interprets the class file for the condensation underlying peutforms. Ivm Is the one that audicultically the main method private in a Java code

The memory management system of the Svy dynamically allows from and managing me mory resources for sava applications

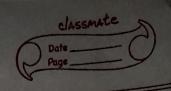
Heap memory: whatever objects weated in

Its a big storage ared where the java program
Keeps all its stuff

stack openory: Stack Memory Keis upp for keeping track of what our program is currently doing enthod trea: The Java program reeps information about its clause and methods in the method and trackage collector: Garbage collection is about getting rid of things you don't need anymore.

Garlage cottect

memory parameters like neap size, garbage collector algorithms, and other related retting based on the applications requirement.



what is the byte code and why is it importants for Java? The SIF rompiler helps improve the performance of.
Java programs by compiling bytecode into native. machine code at run time. - Bytecode is the set of intructions for sava virtual machine, Itil executed a programe with written. in the Java language. 6) Describe the architecture of the JVM. The Jum 15 a softwater based emulation of. physical computer that inables Java programs to. run on any platform 1. clays Loader: - Loads · Java clay fire into the Jun's memory arthog and reformment by 2. Runtime Dato And · Method Area: stores dan metadata, Maricvariable, Heap: - memory ared for object and dynamically allocated memory. Stack: Each thread has it own stack, Morning. method & invorations. Pl legister: Program contater registers keep. trails of the currently executed instruction for ceuh thread Native Method stacks: for native methods a seperand groups and is mightained 3. Execution Engine: Interprets and excuted byrecode. instructions +



4. Native Method Interface (INI) :- Allows Jam cod to call and be called by native applications Ubraries -written in other languages c. Native method libraries: - Lontaine native metho implemented in platform-specific code 6. Garbage · collector: - · Manager memony by rept reclaiming memory occupied by objects the and no longer in we. 7) How does Tava achieve platform independence the the IVM9 Java 1: platform independent because its compiled to a bytecode that can be run on any device that has a svm s) what is the significance of the class loader in I ara! what is the process of garbage collection in Java. clay loaders are responsible for loading Java claves dynamically no the JVM during runtine Garbage collection in Java is the automated process of deleting code thate no longer. neoded or used.