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| **SESSION** | **NOV-DEC 2023** |
| **PROGRAM** | **BCA** |
| **SEMESTER** | **IV** |
| **COURSE CODE & NAME** | **DCA2202&JAVAPROGRAMMING** |
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**Set-I**

**1. Explain java virtual machine? Why is java considered as platform independent? 10**

**Ans 1.**

**Understanding Java Virtual Machine (JVM)**

The Java Virtual Machine (JVM) is a core component of the Java Runtime Environment (JRE), responsible for executing Java bytecode. Java programs are written in the Java programming language and compiled into bytecode. This bytecode is a set of instructions that are not specific to any single processor. Instead, they are designed to be executed by the JVM, making them universally compatible with

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whatsapp no 8791490301.

**2. What are packages in java? Explain any 4 pre- defined packages in details 10**

**Ans 2.**

Packages in Java are a fundamental aspect of the language, offering a means of organizing classes and interfaces into namespaces. This organization aids in avoiding name conflicts and can also control access, since certain classes or interfaces can be declared as package-private. Let's delve into the details of packages in Java and explore four significant pre-defined packages.

**Understanding**

**3. Explain the collection hierarchy. 10**

**Ans 3.**

**Introduction to Java Collection Framework**

In the world of Java programming, the Collection Framework plays a pivotal role in organizing and managing groups of objects. This framework, a well-structured architecture, offers a set of classes and interfaces for storing and manipulating groups of data as a single unit. Understanding this hierarchy is crucial for any Java developer, as it provides the tools to handle data efficiently and

**Set-II**

**4. Explain the various categories of primitive data types used in java programming. Write a suitable java program for any two primitive data type categories. 10**

**Ans 4.**

Java, a widely used programming language, offers a variety of primitive data types that are predefined by the language and named by a keyword. These data types are the building blocks of data manipulation in Java. Understanding these types is essential for any Java programmer. In this discussion, we will

**5. What are exceptions in java? Explain any 4 exception classes in detail. Write a suitable java program to explain the utility of exceptions. 10**

**Ans 5.**

**Exceptions in Java and Their Explanation**

Exceptions in Java are events or conditions that occur during the execution of a program that disrupts the normal flow of instructions. They are used to handle runtime errors and provide a mechanism to gracefully handle unexpected situations. In this discussion, we will explain four important exception classes in Java and provide a suitable Java program to demonstrate their utility.

**1.**

**6. Differentiate between JDBC and ODBC drivers? 10**

**Ans 6.**

**JDBC vs. ODBC Drivers: A Comprehensive Comparison**

When it comes to database connectivity in the world of programming, JDBC (Java Database Connectivity) and ODBC (Open Database Connectivity) are two fundamental technologies that play a pivotal role. They serve as bridges between the application and the database, allowing developers to interact with databases seamlessly. In this comparison, we will delve into the differences between JDBC and ODBC drivers, shedding light on their unique characteristics and