College of Computer Application (04)
Silver Oak College of Computer Application
Bachelor Of Computer Application
Department of Computer Application (023)

Semester :	4	**Academic Year :**	2023-24
Subject Name :	Core Java	**Subject Code :**	2040233210 / 2040233204

QUESTIONS BANK

Q.1.	Explain in detail the definitions and roles of JVM, JDK, Byte Code, and JRE in the context of Java programming.
Q.2.	What is Java? Why is it called a platform-independent language?
Q.3.	Define the Six Object-Oriented Programming (OOP) Concepts and explain each with examples.
Q.4.	Discuss the different data types available in Java and their uses.
Q.5.	Discuss some key features of Java that differentiate it from other programming languages.
Q.6.	Provide definitions for the terms identifier and literals in the context of Java programming.
Q.7.	What is meaning of Public Static Void Main.
Q.8.	Describe the concept of type conversion and casting in Java. Provide examples.
Q.9.	Describe the fundamental structure of a Java Program.
Q.10.	Illustrate various types of operators in Java with examples.
Q.11.	Highlight some key differences between Java and C++.
Q.12.	Discuss the importance of variables in Java and explain different types of variables.
Q.13.	What is Java? Why is it called a platform-independent language?
Q.14.	Explain the syntax for declaring a class in Java. What is the significance of access modifiers in class declaration?
Q.15.	How do you create a class and objects in Java? Provide an example.
Q.16.	What are identifiers in Java? Provide examples of valid and invalid identifiers.
Q.17.	Explain the syntax and usage of the IF, IF...Else and IF...Else..IF statements. in Java with an example.
Q.18.	How do you use nested IF statements in Java? Provide an example.
Q.19.	Describe the syntax and use of the Switch Case statement in Java. Provide an example.
Q.20.	Explain the syntax and usage of the While loop & Do While loop in Java with an example.

Q.21.	Describe the syntax and usage of the For loop in Java with an example.
Q.22.	What is an array in Java? Provide an example of declaring and initializing a one-dimensional array& two-dimensional array in Java.
Q.23.	How do you pass arrays to methods in Java? Provide an example.
Q.24.	Describe the methods of the Arrays class in Java (fill(), sort(), equal(), binary search). Provide examples of each.
Q.25.	Explain the concept of class variables and class methods in Java. How are they different from instance variables and methods?
Q.26.	Classify the variables declared in a class (local variable, instance variable, class variable). Provide examples.
Q.27.	Describe the visibility modifiers for access control in Java (public, private, protected). How are they used?
Q.28.	What is the instance operator in Java? Provide an example of its usage.
Q.29.	Explain the role of the Garbage collector in Java.
Q.30.	What are static methods and static variables in Java? Provide examples.
Q.31.	What is Constructor ? Explain different types of constructors with example.
Q.32.	What is inheritance in Java? How does it help in code reusability?
Q.33.	Explain the concept of Super class and Sub class in inheritance.
Q.34.	What is method overloading? Provide an example demonstrating method overloading in Java.
Q.35.	What is method overriding? How does it differ from method overloading? Provide an example
Q.36.	What is Inheritance? Explain types of inheritance with example.
Q.37.	What is the purpose of the Final keyword in Java? How is it used with variables, methods, and classes?
Q.38.	Discuss the purpose and usage of the this keyword in Java. Provide examples illustrating its use.
Q.39.	Explain the usage of the super keyword in Java. Provide examples demonstrating its use in constructors and method calls.
Q.40.	What is an interface in Java? How does it differ from a class? Provide an example of declaring and implementing an interface.
Q.41.	What is an abstract class in Java? How is it different from a regular class? Provide an example of an abstract class.
Q.42.	Give difference between Abstract class and Interface.
Q.43.	Why is multithreading used in programming? What are its advantages?
Q.35.	Explain the Thread class in Java. How is it used to create and manage threads?
Q.36.	Describe the Runnable interface in Java. How is it used to create threads? Provide an example of implementing the Runnable interface.
Q.37.	Explain different stages of Thread Life Cycle in detail.
Q.38.	What is Thread Synchronization ? Explain with example.
Q.44.	What is a package in Java? How does it help in organizing and managing classes?
Q.45.	How do you use packages in Java? Provide an example of importing and using classes from a package.

Q.46.	Explain the process of creating a package in Java. Provide an example.
Q.47.	Describe the various methods available in the String class in Java. Provide examples of commonly used methods.
Q.48.	Explain the difference between the String class and the String Buffer class in Java. When would you use each one?
Q.49.	What is the String Builder class in Java? How does it differ from the String Buffer class? Provide examples of using the String Builder class.
Q.50.	Explain the concept of polymorphism in Java. How does it allow objects of different classes to be treated as objects of a common super class?
Q.51.	Describe the two types of polymorphism in Java: compile-time polymorphism and runtime polymorphism. Provide examples of each.
Q.52.	Discuss the advantages of exception handling in Java. How does it improve the robustness of Java programs?
Q.53.	What are the different types of exceptions in Java? Differentiate between checked exceptions and unchecked exceptions
Q.54.	Explain the purpose of the try and catch block in Java exception handling. Provide an example.
Q.55.	How do you use multiple catch blocks in Java? Provide an example demonstrating the use of multiple catch blocks.
Q.56.	What is the purpose of the finally block in Java exception handling? How does it differ from the try and catch blocks? Provide an example.
Q.57.	How do you use the throw and throws keywords in Java? Provide examples demonstrating their use.
Q.58.	What are custom exceptions in Java? How do you create and use custom exceptions? Provide an example.
Q.59.	What is Swing in Java? How does it differ from AWT?
Q.60.	Explain the concept of layout managers in Java GUI programming. Describe the Flow Layout, Border Layout, Grid Layout, and Card Layout managers.
Q.61.	Discuss various GUI components available in Swing, including buttons, checkboxes, radio buttons, lists, labels, text fields, password fields, and combo boxes. Provide examples of each component.
Q.62.	How do you create and handle dialog boxes in Swing? Provide examples demonstrating their usage.
PROGRAMS	
Q.1.	Write a java program to find the factorial of the number.
Q.2.	Write a java program to display Fibonacci series .
Q.3.	Write a java program to reverse the given string.
Q.4.	Write a java program to check the given string is palindrome or not
Q.5.	Write a java program to print the prime numbers up to nth number
Q.6.	Write a java program to create user defined package.
Q.7.	Write a java program to represent Abstract class with example.
Q.8.	Write a java program to implement Interface using extends 10 keyword
Q.9.	Write a java program to find the if the arrays are equal

Q.10.	Write a java program to find maximum number in array.
Q.11.	Write a java program to find the Kth Largest and Smallest Element in an Array
Q.12.	Write a java program to find Compute Sum and Average of Array Elements
Q.13.	Write a java program Sum of Array Elements
Q.14.	Write a java program Using for-each Loop
Q.15.	Write a java program Sum of Positive Numbers Only
Q.16.	Write a Java program to find the second largest element in an array.
Q.17.	Write a Java program Constructors Overloading in Java
Q.18.	Write a Java program thread Synchronization.
Q.19.	Write a Java program thread sleep(), join() method.
Q.20.	Write a Java Program to print multiple threads.

Subject Coordinator.
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