



Final Examination: Major Test

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Short answer type questions

Attempt Any 10 Questions.

2*10=20

1. What is the default value of an int variable in Java?

Answer : The default value of an int variable in Java is **0**.

2. Which method is used to get the length of a string in Java?

Answer = .length();

3. What is the use of the final keyword in Java?

Answer = the final keyword is used to restrict modification and enforce immutability

4. What is the parent class of all classes in Java?

Answer = Object class

5. What does the static keyword mean in Java?

Answer = the static keyword signifies that a member (variable, method, block, or nested class) belongs to the class itself, rather than to any instance (object) of that class

6. How do you define a constant in Java?

Answer = public static final datatype CONSTANT_NAME = value;

7. What is the difference between == and equals() in Java?

8. What is method overloading in Java?

Answer = class consists of more than one method with same name and different arguments is called method overloading;

9. What is the difference between a constructor and a method?

Answer =

Constructor: Initializes a newly created object of a class. It allocates memory for the object and sets its initial state.

Method: Performs specific actions or computations on an existing object.

10. What is a JVM in Java?

Answer = In Java, JVM stands for Java Virtual Machine. It's a crucial component of the Java platform that enables Java's "write once, run anywhere" capability

11. What is the use of the super keyword in Java?

Answer = the super keyword is used to refer to the superclass (parent class) of the current class.

12. What is an abstract class in Java?

Answer = An abstract class in Java is a class that cannot be instantiated directly and serves as a blueprint for other classes, defining common attributes and behaviors

13. What is the significance of the this keyword in Java?

Answer = the this keyword refers to the current object within a class

14. What is a package in Java?

Answer = a package is a way to organize related classes and interfaces into a namespace

15. What is garbage collection in Java?

Answer = Garbage collection in Java is an automatic memory management process that reclaims memory occupied by objects that are no longer in use by the program

16. How do you handle exceptions in Java?

Answer = Using Try Catch finally Block or using throws keyword

17. What is the return type of the hashCode() method in Java?

Answer = int

18. What is an interface in Java?

Answer = an interface is a blueprint or contract that defines a set of methods a class must implement, promoting abstraction, polymorphism, and loose coupling

19.What is the main difference between an Array and an ArrayList in Java?

Answer = The main difference between an Array and an ArrayList in Java is their size and flexibility

20.What is multithreading in Java?

Answer = Multithreading in Java is a capability that allows a program to execute multiple parts (called threads) concurrently, leading to improved performance and responsiveness, especially in applications with tasks that can run independently.

Practical Question

Attempt Any 10 Questions.

5*10=50

1. Write a Java program to check if a number is even or odd.
2. Write a program to find the sum of all elements in an array.
3. Write a Java program to find the factorial of a number.
4. Write a program to check if a string is a palindrome or not.
5. Write a Java program to print the Fibonacci series up to a given number.
6. Write a Java program to reverse an array.
7. Write a program to check if a number is prime.
8. Write a Java program to swap two numbers using a third variable.
9. Write a Java program to find the largest of three numbers.
10. Write a program to print the following star pattern:



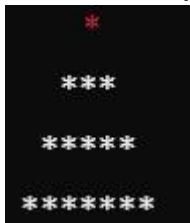
11. Write a program to implement Bubble Sort in Java.

12. Write a Java program to demonstrate the concept of method overloading.

13. Write a program to print the following star pattern:



14. Write a program to print the following pyramid pattern:



15. Write a Java program to check if two strings are anagrams.

16. Write a Java program to implement linear search on an array.

17. Write a Java program to demonstrate the use of inheritance by creating a base class Animal and subclass Dog.

18. Write a program to print the following diamond pattern:



19. Write a Java program to implement multithreading by extending the Thread class and implementing the Runnable interface.

20. Write a Java program to implement a Singleton design pattern.

“हर क ठनाई के पीछे एक बड़ा अवसर छु पा होता है।”

(Every challenge hides a great opportunity.)

Best Of Luck