Java Interview Test Paper – Total time to solve: 1 hour.

1. What is the correct syntax to declare a method in Java?
a) method void myMethod() {}
b) void myMethod() {}
c) function myMethod() {}
d) def myMethod() {}

2. In Java, which keyword is used to implement multiple inheritance?
a) extends
b) implements
c) multiple
d) inheritance

3. What is the purpose of the 'finally' block in a try-catch-finally statement?
a) It is executed if an exception is caught.
b) It is always executed, regardless of whether an exception is caught or not.
c) It is executed only if no exception occurs.
d) It is used to define custom exceptions.

4. What is the correct way to create an object in Java?
a) new Object();
b) create Object();
c) Object.create();
d) Object.new();

5. What is the output of the following code?
```
int x = 10;
System.out.println(x > 5 ? "Greater" : "Smaller");
```
a) Greater
b) Smaller
c) true
d) false

6. Which collection class is synchronized in Java?
a) ArrayList
b) LinkedList
c) HashMap
d) Vector

7. What does the static keyword indicate in Java?
a) It is used to declare a constant.
b) It is used to create an instance of a class.
c) It is used to define a class method.
d) It is used to indicate a variable that can be modified.

8. What is the correct way to declare an array in Java?

a) array int[] myArray;
b) int myArray[];
c) int[] myArray;
d) array myArray[];

9. In Java, which keyword is used to prevent a method from being overridden?
a) static
b) final
c) private
d) abstract

10. What is the output of the following code?
```
String str1 = "Java";
String str2 = new String("Java");
System.out.println(str1 == str2);
```

a) true
b) false
c) Compile-time error
d) Runtime error

11. What is the correct way to declare a variable in Java?
a) int x;
b) x = 5;
c) variable x;
d) declare int x;

12. What is the output of the following code?
```
int x = 5;
System.out.println(x++);
```

a) 5
b) 6
c) 4
d) 7

13. What keyword is used to define a constant in Java?
a) constant
b) static
c) final
d) const

14. Which of the following is not a primitive data type in Java?
a) int
b) float
c) char
d) class

15. What is the purpose of the 'this' keyword in Java?
a) It refers to the current instance of the class.
b) It is used to create a new instance of a class.
c) It refers to the superclass of the current class.
d) It is used to refer to the parent class.

16. What does the 'super' keyword represent in Java?
a) It refers to the superclass of the current class.
b) It is used to create a new instance of a class.
c) It refers to the current instance of the class.
d) It is used to refer to the child class.

17. What is the correct way to initialize an array in Java?
a) int arr[] = new int[5];
b) int arr[5] = {1, 2, 3, 4, 5};
c) int arr[] = {1, 2, 3, 4, 5};
d) int arr[5];

18. What is the output of the following code?

```
String str = "Hello, World!";
System.out.println(str.length());
```

a) 13
b) 12
c) 14
d) 11

19. In Java, which operator is used to concatenate two strings?
a) &
b) &&
c) +
d) ||

20. What is the purpose of the 'break' statement in Java?
a) It is used to exit a loop or switch statement.
b) It is used to skip the current iteration of a loop.
c) It is used to terminate the program.
d) It is used to jump to a specific line of code.

21.What is the main difference between ArrayList and LinkedList in Java?
a) ArrayList is faster for insertion and deletion.
b) LinkedList is backed by an array, while ArrayList is backed by a linked list.
c) ArrayList is synchronized, while LinkedList is not.
d) LinkedList is faster for insertion and deletion.

22.In Java, which interface is implemented by all the collection classes?
a) List

b) Collection
c) Set
d) Map

23.What is the purpose of the HashMap class in Java?
a) To store elements in a sorted order.
b) To store key-value pairs.
c) To store elements in a stack.
d) To store elements in a queue.

24.How can you iterate through all elements of a List in Java?
a) Using a for loop
b) Using an enhanced for loop (for-each loop)
c) Using an iterator
d) All of the above

25. In Java, what is the purpose of the finally block in a try-catch-finally statement?
a) It is executed only if an exception is caught.
b) It is always executed, regardless of whether an exception is caught or not.
c) It is used to define a custom exception.
d) It is executed only if no exception occurs.

26.What is the difference between throw and throws in Java?
a) throw is used to declare an exception, while throws is used to throw an exception.
b) throw is used to throw an exception, while throws is used to declare an exception.
c) They are used interchangeably.
d) There is no difference between them.

27. Which of the following exceptions is a checked exception?
a) NullPointerException
b) ArithmeticException
c) ArrayIndexOutOfBoundsException
d) IOException

28.What is the purpose of the try-with-resources statement introduced in Java 7?
a) To catch exceptions thrown in the try block.
b) To automatically close resources such as files or sockets.
c) To declare a custom exception.
d) To handle runtime exceptions.

29.What is multi-threading?

a) Running multiple programs simultaneously
b) Executing multiple threads in a single process
c) Running multiple processes in parallel
d) Executing multiple classes concurrently

30.How do you create a thread in Java?

a) Using the start() method
b) Using the run() method
c) By instantiating the Thread class
d) By implementing the Runnable interface

31. What is the purpose of the join() method in Java?

a) To synchronize threads
b) To pause a thread's execution
c) To terminate a thread
d) To wait for a thread to finish

32. What is the output of the following Java code?

```
public class MyClass {
   public static void main(String[] args) {
      System.out.println("Hello, " + args[0] + "!");
   }
}
```

a) Hello, World!
b) Hello, null!
c) Compilation error
d) ArrayIndexOutOfBoundsException

33. What is the purpose of the break statement in a loop?

a) To exit the loop
b) To skip the current iteration and move to the next one
c) To terminate the program
d) To return a value from the loop

34. In Java, can a subclass access private members (fields or methods) of its superclass?

a) Yes
b) No
c) Only if they are static
d) Only if they are declared as protected

35.What is the keyword used for inheritance in Java?

a) extends
b) implements

c) inherits
d) uses

36.What is abstraction in Java?

a) Hiding implementation details and showing only essential features
b) Creating objects from a class
c) Using abstract classes only
d) Implementing interfaces

37.Which keyword is used to declare an abstract class in Java?

a) abstract
b) class
c) interface
d) abstractClass

38. Can an abstract class have non-abstract methods?

a) Yes
b) No
c) Only if the class is final
d) Only if the class is private

39. **Which data structure allows elements to be stored in a contiguous memory location?**

A) ArrayList

B) LinkedList

C) HashSet

D) HashMap

40. **Which interface in Java provides support for iterating over the elements of a collection in both forward and backward directions?**

A) Iterable

B) Collection

C) List

D) BidirectionalIterable

41. What is the primary difference between a HashSet and a HashMap?

A) HashSet stores key-value pairs, while HashMap stores elements.

B) HashSet allows duplicate elements, while HashMap does not.

C) HashSet does not maintain any order, while HashMap maintains key-value associations.

D) HashSet provides faster access to elements than HashMap.

42. What happens if the "remove ()" method of an Iterator is called without a preceding call to "next ()"?

A) The previous element is removed.

B) An exception is thrown.

C) The next element is removed.

D) The Iterator is reset to the beginning

43. **Write a Java program to get the value of a specified key in a map?**

Answer:

```
import java.util.*;
public class Example {
public static void main(String args[]){
  HashMap<Integer,String> hash_map= new HashMap<Integer,String>();
  hash_map.put(1,"Red");
  hash_map.put(2,"Green");
  hash_map.put(3,"Black");
  hash_map.put(4,"White");
  hash_map.put(5,"Blue");

  // get value of key 3
  String val=(String)hash_map.get(3);
   // check the value
```

```
  System.out.println("Value for key 3 is: " + val);
 }
}
```