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1. …… keyword is used to invoke the current object.
    a. new
    b. that
    c. final
    d. this

Ans: d. this

Explanation: "this" keyword is used to invoke the current object. The "this" keyword in Java is a reference to the current object whose method or constructor is being invoked.

2. What does the this() keyword refer to within a class?
    a. The current object being created.
    b. A static method of the class.
    c. A parent class.
    d. A local variable.

Ans: a. The current object being created.

Explanation: this() refers to the current object being created within a constructor. this() is used for constructor chaining, which allows one constructor to call another within the same class.

3. Where must this() appear in a constructor?
    a. Anywhere.
    b. At the end.
    c. At the beginning
    d. After returning a value.

Ans: c. At the beginning

Explanation:this() must appear at the beginning of a constructor. The call to this() must be the first statement because the Java compiler mandates that constructor chaining is resolved before the rest of the constructor executes.

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4. The 'this' keyword provides access to _____ variables.
    a. Local
    b. Parameter
    c. Instance
    d. This

Ans: c. Instance

Explanation: The "this" keyword provides access to instance variables. "this" differentiates instance variables from local variables with the same name in a class.

5. What would be the behavior of this() if used inside a method (not a constructor)?
    a. Runtime error
    b. Throws exception
    c. Compile-time error
    d. Runs successfully

Ans: c. Compile-time error

Explanation:this() in a method (not a constructor) causes a compile-time error. The this() call is reserved for constructor chaining and cannot be used in ordinary methods.

6. Where is the this() constructor call used?
    a. In any method of the class.
    b. Only in the main method.
    c. Within another constructor of the same class.
    d. To call a method of a different class.

Ans: c. Within another constructor of the same class.

Explanation:this() is used within another constructor of the same class. It facilitates constructor chaining, which means one constructor can reuse the logic of another.

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7. Which keyword lets you access the current object's variables and methods within a class?
    a. Super
    b. Final
    c. This
    d. Either super or this

Ans: c. This

Explanation: The "this" keyword accesses the current object's variables and methods. this refers to the current instance of the class and can access both instance variables and instance methods.

8. Keyword ……. is always a reference to the object.
    a. new
    b. this
    c. invoke
    d. class

Ans: b. this

Explanation:this is always a reference to the object. It is an implicit reference to the current instance of the class.

9. What is the role of this() within a constructor of a class?
    a. Method calling
    b. Constructor chaining
    c. Object creation
    d. Inheritance

Ans: b. Constructor chaining

Explanation:this() is used for constructor chaining. When multiple constructors are defined, this() allows one constructor to invoke another, simplifying code reuse.

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10. What does this() not do?
    a. Pass the current object.
    b. Call another constructor.
    c. Call a constructor from another class.
    d. Return the current object.

Ans: c. Call a constructor from another class.

Explanation:this() cannot call a constructor from another class. this() is strictly limited to calling constructors within the same class.

11. Can "this()" return the current object?
    a. Yes.
    b. No.
    c. Only for static methods.
    d. Only for instance variables.

Ans: a. Yes.

Explanation:this() can return the current object. this can be used to return the current object in a method.

12. Which is true about this()?
    a. It calls methods from other classes.
    b. It must be last in the constructor.
    c. It chains constructors in the same class.
    d. It calls static methods.

Ans: c. It chains constructors in the same class.

Explanation:this() chains constructors in the same class. This is its primary purpose and ensures consistency across constructors.

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13. What happens if this() is not first in a constructor?
    a. It works.
    b. Compile error.
    c. Calls superclass constructor.
    d. Runtime error.

Ans: b. Compile error.

Explanation: If this() is not first in a constructor, a compile error occurs. Java requires this() to be the first statement in a constructor to ensure proper initialization.

14. To return the current instance from a method, the return type of the method must be:
    a. void
    b. primitive type
    c. The class type
    d. Object

Ans: c. The class type

Explanation: The return type must be the class type to return the current instance. For "return this; " to work, the method's return type must match the class type or be compatible.

15. Which of the following is the correct way to return the current object in a method?
    a. return new this();
    b. return this;
    c. return this();
    d. return thisObject;

Ans: b. return this;

Explanation:return this; correctly returns the current object. This syntax allows methods to return the object on which the method was called.

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16. Which return type is required to use "return this;" inside a method?
    a. Object
    b. void
    c. The class type (non-primitive)
    d. int

Ans: c. The class type (non-primitive)

Explanation: The return type for return this; must be the class type. Returning this from a method requires the return type to match the instance's type.

17. In the following method, what will this refer to?

```
public MyClass myMethod() {
    return this;
}
```

    a. The class type MyClass
    b. A new instance of MyClass
    c. The current instance of MyClass
    d. The superclass of MyClass

Ans: c. The current instance of MyClass

Explanation:this in a method returns the current instance. In the method, "this" refers to the instance on which the method is called.

18. Where is this() commonly passed as an argument?
    a. Constructor chaining
    b. Event handling
    c. Method overloading
    d. Static methods

Ans: b. Event handling

Explanation:"this" is commonly passed in event handling. It is often passed to refer to the current object as the event handler.

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19. When is "this" typically used in event handling?
    a. To refer to the current object.
    b. To call a superclass method.
    c. To refer to static methods.
    d. To refer to an event handler.

Ans: a. To refer to the current object.

Explanation:this in event handling refers to the current object. This keyword is used to refer to the instance handling the event.

20. What is the correct way to use this to refer to the current instance?
    a. this();
    b. this.methodName();
    c. this.variableName;
    d. this = new ClassName();

Ans: c. this.variableName;

Explanation:this.variableName refers to the current instance's variable. This syntax accesses instance variables of the current object.

21. Can the keyword "this()" be used in a static method?
    a. Can be used in static methods.
    b. Cannot be used in static methods.
    c. Is automatically used in static methods.
    d. Is only used in instance methods.

Ans: b. Cannot be used in static methods.

Explanation:this() cannot be used in static methods. Since this refers to an instance, it cannot be used in a static context, where no instance exists.

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22. Which of the following is not a valid use of this?
    a. Passing the current object.
    b. Calling a constructor with this().
    c. Referring to a static variable.
    d. Accessing instance variables.

Ans: c. Referring to a static variable.

Explanation:this cannot refer to a static variable. Static variables belong to the class, not any specific instance, so this cannot access them.

23. Which of the following is NOT a valid use of the "this" keyword?
    a. this.toString();
    b. this = new Point(10, 20);
    c. this.method1();
    d. return this;

Ans: b. this = new Point(10, 20);

Explanation:this = new Point(10, 20); is invalid. The "this" reference cannot be assigned a new value, as it is implicitly final.

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24. Consider the following code snippet:

```
class MyClass {
   int x;
   MyClass method1() {
      this.x = 10;
      return this;   }
   void method2() {
      this.method1();
      System.out.println(this.x);
   }
}
```

What will be the output of new MyClass().method2();?

a. 0
b. 10
c. Compilation error
d. Runtime error

Ans: b. 10

Explanation: Output of new MyClass().method2(); is 10. The "this" reference ensures that the correct instance variable (x) is modified, and the value is retained across method calls.

25. Which of the following operators is used with the keyword this?

a. ->
b. . (dot)
c. +
d. ^

Ans: b. . (dot)

Explanation: The dot (.) operator is used with this to access properties and methods of an object. For example, this.property retrieves the value of property in the current object.

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26. Where can the 'this' keyword be used?
    a. Inside the class
    b. Inside a method
    c. Anywhere in the source file
    d. Both B & C

Ans: b. Inside a method

Explanation: This keyword is used inside a method to refer to the object the method belongs to.

27. Can two local variables have the same name?
    a. Yes
    b. No
    c. Yes. If it is an integer
    d. Yes. If it is an object

Ans: b. No

Explanation: No, two local variables cannot have the same name in the same scope, as it would cause a conflict.

28. What happens when a method references an instance variable or a method?
    a. Error flagged
    b. Code runs well
    c. Compiler automatically inserts 'this' keyword before the reference.
    d. Result is unpredictable

Ans: c. Compiler automatically inserts 'this' keyword before the reference.

Explanation: When a method references an instance variable or method, the compiler automatically inserts this keyword before the reference to indicate that it belongs to the current object.

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29. How does a parameterized constructor call a non-parameterized constructor?
    a. Using super
    b. Cannot call
    c. Using the method name
    d. Using this

Ans: d. Using this

Explanation: A parameterized constructor can call a non-parameterized constructor using this keyword. This allows the constructor to invoke another constructor in the same class.

30. What is used to refer to the local variable when its name is the same as the parameter's name?
    a. this keyword
    b. super keyword
    c. self-keyword
    d. new keyword

Ans: a. this keyword

Explanation: This keyword is used to refer to the local variable when its name is the same as the parameter's name, distinguishing between the instance variable and the parameter.

31. Can this keyword be used with a static variable in Java?
    a. Yes
    b. No
    c. Only in static methods
    d. Only in static blocks

Ans: b. No

Explanation: This keyword refers to the current instance of a class and cannot be used with static variables because static variables belong to the class, not to any specific instance.

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32. Can a local variable and the parameter have the same name?
    a. Yes
    b. No
    c. Only after Java 7
    d. Only before Java 3

Ans: a. Yes

Explanation: A local variable and a method parameter can have the same name, but when they do, the local variable takes precedence. To refer to the parameter in such cases, this keyword is used.

33. What happens when the local variable and the instance variable have the same name?
    a. Error flagged
    b. Nothing happens
    c. local variable hides the instance variable inside the local scope.
    d. Unpredictable

Ans: c. local variable hides the instance variable inside the local scope.

Explanation: When a local variable and an instance variable share the same name, the local variable takes precedence within its scope, effectively hiding the instance variable.

34. What is calling the default constructor from a parameterized constructor called?
    a. Inheritance
    b. Constructor chaining
    c. Constructor cloning
    d. Constructor extension

Ans: b. Constructor chaining

Explanation: Calling one constructor from another within the same class is referred to as constructor chaining, and it is achieved using the this() keyword.