Instance , Static And Local Variable In Java

Object Oriented Programming Using java

* Indicates required question

1. Email *

2. Name *

3. University ID *

4. Class roll number *

5. Section *

Mark only one oval.

- C
- E
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- J
- AH

6. Email *

Static variables

7. Question 1: * 1 point

Which keyword is used to declare a static variable in Java?

Mark only one oval.

- A) static
- B) var
- C) final
- D) const

Static variables

8. Question 2: * 1 point

Static variables are also known as:

Mark only one oval.

- A) Local variables
- B) Instance variables
- C) Class variables
- D) Dynamic variables

Static variable

9. Question 3: * 1 point

What is the main characteristic of a static variable?

Mark only one oval.

- A) It can be accessed only within the method it is declared
- B) It can be accessed using an instance of the class
- C) It is shared among all instances of the class
- D) It can be modified by any method in the class

Static variable

10. Question 4: * 1 point

Which of the following is true about static variables?

Mark only one oval.

- A) Each instance of the class has its own copy of a static variable
- B) Static variables are automatically initialized to 0
- C) Static variables are stored on the heap memory
- D) Static variables can be declared with the "final" keyword

Static variable

11. Question 5: * 1 point

Which of the following is a valid declaration of a static variable named "count"?

Mark only one oval.

- A) static count = 0;
- B) static int count = 0;
- C) int static count = 0;
- D) int count = static 0;

Static variable

12. Question 6: * 1 point

Where is the memory allocated for static variables in Java?

Mark only one oval.

- A) Stack
- B) Heap
- C) Method area (Class area)
- D) Local memory

Static Variable

13. Question 7: * 1 point

Which of the following statements is true regarding the initialization of static variables?

Mark only one oval.

- A) Static variables are initialized at the time of object creation.
- B) Static variables are initialized when the class is loaded.
- C) Static variables must be explicitly initialized in the constructor.
- D) Static variables are initialized only when they are accessed for the first time.

Static Variable

14. Question 8: * 1 point

Which access modifier is often used with static variables to make them accessible only within the class?

Mark only one oval.

- A) public
- B) protected
- C) private
- D) static

Static variable

15. Question 9: * 1 point

What is the significance of using static variables in Java?

Mark only one oval.

- A) They improve the efficiency of memory usage.
- B) They help in achieving encapsulation.
- C) They allow data to be shared across all instances of the class.
- D) They are used for creating local variables within methods.

Static Variable

16. Question 10: * 1 point

Can static variables be accessed without creating an instance of the class?

Mark only one oval.

- A) Yes, static variables can be accessed using the class name.
- B) No, static variables can only be accessed through an instance of the class.
- C) Yes, but only if they are declared as public.
- D) No, static variables cannot be accessed in any way.

multiple-choice questions (MCQs) related to Java instance variables:

17. Question 1: * 1 point

Instance variables in Java are also known as:

Mark only one oval.

- A) Static variables
- B) Local variables
- C) Dynamic variables
- D) Object variables

multiple-choice questions (MCQs) related to Java instance variables:

18. Question 2: * 1 point

Where are instance variables stored in Java?

Mark only one oval.

- A) Stack
- B) Heap
- C) Method area (Class area)
- D) Local memory

multiple-choice questions (MCQs) related to Java instance variables:

19. Question 3: * 1 point

Which keyword is used to declare an instance variable in Java?

Mark only one oval.

- A) instance
- B) var
- C) final
- D) this

multiple-choice questions (MCQs) related to Java instance variables:

20. Question 4: * 1 point

What is the main characteristic of an instance variable?

Mark only one oval.

- A) It can be accessed using the class name
- B) It is shared among all instances of the class
- C) It is created when a method is invoked
- D) Each instance of the class has its own copy of an instance variable

multiple-choice questions (MCQs) related to Java instance variables:

21. Question 5: * 1 point

Instance variables are initialized:

Mark only one oval.

- A) At the time of class loading
- B) Automatically to default values
- C) Using the "new" keyword
- D) Within the constructor or directly at the point of declaration

multiple-choice questions (MCQs) related to Java instance variables:

22. Question 6: * 1 point

Which of the following is a valid declaration of an instance variable named "age"?

Mark only one oval.

- A) instance age = 25;
- B) int age = instance 25;
- C) static int age = 25;
- D) int age = 25;

multiple-choice questions (MCQs) related to Java instance variables:

23. Question 7: * 1 point

Which access modifier is often used with instance variables to make them accessible only within the class?

Mark only one oval.

- A) public
- B) protected
- C) private
- D) instance

multiple-choice questions (MCQs) related to Java instance variables:

24. Question 8: * 1 point

Instance variables can be accessed:

Mark only one oval.

- A) Using the "this" keyword or the object reference of the class.
- B) Using the class name
- C) Only within the constructor
- D) Only within static methods

multiple-choice questions (MCQs) related to Java instance variables:

25. Question 9: * 1 point

What is the scope of an instance variable?

Mark only one oval.

- A) It is limited to the method it is declared in
- B) It is limited to the class it is declared in
- C) It is limited to the package it is declared in
- D) It is limited to the block of code it is declared in

multiple-choice questions (MCQs) related to Java instance variables:

26. Question 10: * 1 point

When are instance variables destroyed?

Mark only one oval.

- A) When the program terminates
- B) When the class is unloaded from memory
- C) When the object that contains them is garbage collected
- D) When the instance variable is no longer needed

multiple-choice questions (MCQs) related to Java local variables:

27. Question 1: * 1 point

Local variables in Java are declared within:

Mark only one oval.

- A) The class body
- B) The method body
- C) The constructor
- D) The instance block

multiple-choice questions (MCQs) related to Java local variables:

28. Question 2: * 1 point

What is the scope of a local variable?

Mark only one oval.

- A) It is limited to the class it is declared in
- B) It is limited to the package it is declared in
- C) It is limited to the method it is declared in
- D) It is limited to the block of code it is declared in

multiple-choice questions (MCQs) related to Java local variables:

29. * 1 point

Question 3:
Which access modifier is often used with local variables?

Mark only one oval.

- A) public
- B) protected
- C) private
- D) No access modifier is needed

multiple-choice questions (MCQs) related to Java local variables:

30. * 1 point

Question 4:
When are local variables destroyed?

Mark only one oval.

- A) When the program terminates
- B) When the class is unloaded from memory
- C) When the method in which they are declared exits or completes
- D) When the instance variable is no longer needed

multiple-choice questions (MCQs) related to Java local variables:

31. Question 5: * 1 point

What is the main characteristic of a local variable?

Mark only one oval.

- A) It can be accessed within any method of the class
- B) It can be accessed using the class name
- C) It is created when an object is created
- D) It is only accessible within the block of code it is declared in

multiple-choice questions (MCQs) related to Java local variables:

32. Question 6: * 1 point

Local variables are initialized:

Mark only one oval.

- A) At the time of class loading
- B) Automatically to default values
- C) Using the "new" keyword
- D) Within the method or block of code in which they are declared

multiple-choice questions (MCQs) related to Java local variables:

33. Question 7: * 1 point

Which of the following is a valid declaration of a local variable named "count"?

Mark only one oval.

- A) local count = 5;
- B) int count = local 5;
- C) int count = 5;
- D) count = 5;

multiple-choice questions (MCQs) related to Java local variables:

34. Question 8: * 1 point

Local variables must be initialized:

Mark only one oval.

- A) Before they are declared
- B) At the end of the program
- C) Within a loop
- D) Before they are used

multiple-choice questions (MCQs) related to Java local variables:

35. Question 9: * 1 point

Can local variables have access modifiers?

Mark only one oval.

- A) Yes, they can have any access modifier
- B) No, local variables cannot have access modifiers
- C) Only public and private access modifiers are allowed for local variables
- D) Only static access modifier is allowed for local variables

multiple-choice questions (MCQs) related to Java local variables:

36. Question 10: * 1 point

What happens if you try to access a local variable outside of its scope?

Mark only one oval.

- A) The program will compile successfully but throw a runtime error
- B) The program will not compile
- C) The variable's value will be automatically set to null
- D) The variable's value will be preserved

multiple-choice questions (MCQs) related to Java local variables:

37. Local variables can be marked as "final". * 1 point

Mark only one oval.

- A) True
- B) False

multiple-choice questions (MCQs) related to Java local variables:

38. Local variables can have default values if not explicitly initialized. * 1 point

Mark only one oval.

- A) True
- B) False

multiple-choice questions (MCQs) related to Java local variables:

39. Local variables can have access modifiers such as public or private. * 1 point

Mark only one oval.

- A) True
- B) False

Question: Consider the following Java class:

40. * 1 point

```
public class Car {
    int speed;

    public Car(int initialSpeed) {
        speed = initialSpeed;
    }

    public void increaseSpeed(int increment) {
        speed += increment;
    }

    public void displaySpeed() {
        System.out.println("Speed: " + speed + "
km/h");
    }
}
```

What will be the output of the following code snippet?

```
Car myCar = new Car(60);
myCar.increaseSpeed(20);
myCar.displaySpeed();
```

Mark only one oval.

- a) Speed: 60 km/h
- b) Speed: 80 km/h

c) Speed: 20 km/h

d) Compilation Error

Question: Consider the following Java class:

41. * 1 point

```
public class BankAccount {
    double balance;

    public BankAccount(double initialBalance) {
        balance = initialBalance;
    }

    public void deposit(double amount) {
        balance += amount;
    }

    public void withdraw(double amount) {
        if (amount <= balance) {
            balance -= amount;
        } else {
            System.out.println("Insufficient balance.");
        }
    }

    public void displayBalance() {
        System.out.println("Balance: $" + balance);
    }
}
```

What will be the output of the following code snippet?

```
BankAccount myAccount = new
```

```
BankAccount(1000);
myAccount.deposit(500);
myAccount.withdraw(300);
myAccount.displayBalance();
```

Mark only one oval.

- a) Balance: $700.0
- b) Balance: $1200.0
- c) Balance: $300.0
- d) Insufficient balance.

Question: Consider the following Java class:

42. * 1 point

```
public class Product {
    String name;
    double price;

    public Product(String productName, double
productPrice) {
        name = productName;
        price = productPrice;
    }

    public void displayDetails() {
        System.out.println("Product: " + name + ",
Price: $" + price);
    }
}
```

What will be the output of the following code snippet?

```
Product laptop = new Product("Laptop", 899.99);
Product phone = new Product("Phone", 499.99);

laptop.displayDetails();
phone.displayDetails();
```

Mark only one oval.

- A) Product: Laptop, Price: $899.99
- Product: Phone, Price: $499.99
- B) Laptop: $899.99
- Phone: $499.99

C) Product: Laptop, Price: Laptop, Price: Phone, Price: $499.99

D) Compilation Error
