1. Which of the following is a correct syntax for a lambda expression?

a) `(a, b) -> a + b`
b) `(int a, int b) => a + b`
c) `(a, b) : a + b`
d) `a, b -> a + b`

---

2. A lambda expression can be assigned to:

a) An interface with only one abstract method
b) Any abstract class
c) Any interface
d) Only concrete classes

---

3. Identify the incorrect lambda expression:

a) `(x) -> x * 2`
b) `x -> { return x + 1; }`
c) `(x, y) -> { x + y }`
d) `(int x) -> x * x`

---

4. What is the return type of the following lambda?

```
(int x, int y) -> x + y
```

a) int
b) void
c) double
d) No return type

---

5. Lambda expressions can be used to instantiate:

a) Functional interfaces
b) Abstract classes
c) Enum types
d) Concrete classes

---

6. Choose the correct lambda for multiplying two numbers:

a) `(x, y) -> { x * y; }`
b) `(x, y) => x * y`
c) `(x, y) -> x * y`
d) `x, y -> { return x * y }`

---

7. Which one is an invalid lambda syntax?

a) `() -> System.out.println("Hello")`
b) `(String s) -> { System.out.println(s); }`
c) `(int x, int y) -> { return x * y }`
d) `x -> x + 1`

---

8. Lambda expressions can have how many abstract methods in the target type?

a) One
b) Two
c) Three
d) Unlimited

---

9. Lambda expressions can capture:

a) Only instance variables
b) Only static variables
c) Final or effectively final variables
d) Any variable freely

---

10. Find the lambda that has a syntax error:

a) `(int x, int y) -> { return x + y; }`
b) `(int x, y) -> x + y`
c) `(x, y) -> { return x + y; }`
d) `(x) -> x * x`

---

11. What happens if you use a non-final local variable inside a lambda?

a) It compiles normally
b) Compilation error
c) Runtime error
d) Automatically becomes final

---

12. Which lambda correctly represents a method that accepts no parameters and returns a string?

a) `() -> "Hello"`
b) `-> "Hello"`
c) `( ) => "Hello"`
d) `() : "Hello"`

---

13. Choose the valid lambda expression:

a) `n -> n + 10`
b) `(n) -> { return n + 10 }`
c) `int n -> n + 10`
d) `n => n + 10`

---

14. Lambda expressions were introduced in which Java version?

a) Java 6
b) Java 7
c) Java 8
d) Java 9

---

15. Which of these is NOT true about lambda expressions?

a) They provide a clear and concise way to represent a method
b) They can have multiple abstract methods inside the interface
c) They can be used to implement functional interfaces
d) They can capture outer variables if they are effectively final

---

16. A lambda expression `(int a, int b) -> a + b` corresponds to which kind of method?

a) Takes two ints and returns an int
b) Takes two ints and returns void
c) Takes two Strings and returns a String
d) Takes no arguments

---

17. Select the incorrect way of writing a lambda with no parameters:

a) `() -> System.out.println("No parameters")`
b) `() => System.out.println("No parameters")`
c) `() -> { System.out.println("No parameters"); }`
d) `( ) -> "Done"`

---

18. Which functional interface matches a lambda that returns a boolean value?

a) Runnable
b) Predicate
c) Supplier
d) Consumer

---

19. Which lambda is incorrectly written?

a) `(a, b) -> a > b`
b) `(a, b) -> { return a > b; }`
c) `(a, b) : a > b`
d) `(a, b) -> (a > b)`

---

20. Which lambda expression is invalid?

a) `(int x) -> x + 1`
b) `(x, y) -> x - y`
c) `(int x, int y) -> { x + y; }`
d) `() -> { return 100; }`

Descriptive Scenario 1:

Task:
Write a lambda expression that accepts two integers and returns their sum.

Requirement:
Use the predefined functional interface `BiFunction<Integer, Integer, Integer>` to implement and test the lambda.

Descriptive Scenario 2:

Task:
Create a lambda expression that takes no arguments and prints "Processing complete."

Requirement:
Use the predefined functional interface `Supplier<String>`, and print the supplied value.

Descriptive Scenario 3:

Task:
Write a lambda expression that checks whether a given integer is even.

Requirement:
Use the predefined functional interface `Predicate<Integer>`. The lambda should return `true` if the number is even, otherwise `false`.

Descriptive Scenario 4:

Task:
Create a lambda expression that takes a `String` and returns its length.

Requirement:
Use the predefined functional interface `Function<String, Integer>` to implement and test this functionality.

Descriptive Scenario 5:

Task:
Develop a lambda expression that takes a floating-point number (`Float`) and prints whether it is positive or negative.

Requirement:
Use the predefined functional interface `Consumer<Float>`, and print an appropriate message like "Positive" or "Negative".