Day 2 ASSESSMENT

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1. Which of the following is a comparison operator in Java?
   1. += 2. ==
   3. && 4. %

2. What is the result of 5 + 3 * 2 > 10 && !(7 == 7) ?
   1. true
   2. false
   3. Erro
   4. Cannot be evaluated

3. Which operator is used to check if two values are not equal in Java?
   1. !== 2. !=
   3. < 4. ==

4. What will true || false && false evaluate to?
   1. true 2. false
   3. null 4. Error

5. Which of the following expressions is logically incorrect?
   1. x == 10
   2. x = 5 in an if condition
   3. x != y
   4. !(x > y)

6. In Java, what is the result of the expression !(false || true)?
   1. true 2. false
   3. Error 4. 0

7. What is the precedence order among these: &&, ==, +?
   1. + > == > &&
   2. && > == > +
   3. == > && > +
   4. + > && > ==

8. What's wrong here?
```
if(x = 10){
    System.out.println("Ten");
}
```
   1. Missing semicolon
   2. = should be ==
   3. No braces used
   4. x should be declared

9. Which of these evaluates to true only if both expressions are true?
   1. || 2. ==
   3. && 4. !

10. Guess the Output:
```
int a = 10, b = 20;
System.out.println(a > 5 && b < 15);
```
   1. true 2. false
   3. Error 4. null

11. What is the output of the following code?
```
int num = 0;
if(num > 0) System.out.println
("Positive"); else if(num < 0)
 System.out.println("Negative");
else System.out.println("Zero");
```
   1. Positive 2. Negative
   3. Zero 4. Error

12. In which situation would you prefer if-else over switch?
   1. When comparing a variable against constant values
   2. When performing range-based conditions
   3. When matching string literals
   4. When dealing with enums

13. What is the syntax for the ternary operator in Java?

1. condition : true ? false
2. condition ? valueIfTrue : valueIfFalse
3. if ? then : else
4. if (condition) {value1} else {value2}

14. Guess the Output:

```
int age = 17;
System.out.println(age >= 18 ? "Eligible" : "Not Eligible");
```

1. Eligible
2. Not Eligible
3. Error
4. null

15. Which of the following represents a nested if structure correctly?

1. if(a) else if(b)
2. if(a) { if(b) { } }
3. if(a) && if(b)
4. if(a) then if(b)

16. Debug the Code:

```
int x = -10;
if(x > 0)
    System.out.println("Positive")
else
    System.out.println("Negative");
```

1. Missing braces
2. Missing semicolon after println()
3. Wrong comparison
4. None

17. Which control structure is used when you have 3 or more mutually exclusive conditions?

1. Nested if
2. if-else if-else
3. Ternary
4. switch

18. What will the following code print?

```
int a = 10, b = 5;
if(a > b)
    if(a > 100)
        System.out.println("Big");
    else
        System.out.println("Small");
```

1. Big
2. Small
3. Error
4. Nothing

19. What is the primary limitation of the switch statement in Java?

1. Cannot compare integers
2. Cannot evaluate logical expressions or ranges
3. Requires semicolons after each case
4. Cannot use strings

20. Guess the Output:

```
int day = 3;
switch(day){
  case 1: System.out.println("Monday"); break;
  case 2: System.out.println("Tuesday"); break;
  case 3: System.out.println("Wednesday"); break;
  default: System.out.println("Invalid"); }
```

1. Monday
2. Tuesday
3. Wednesday
4. Invalid

21. Which case will execute if no case matches in a switch block and no default is defined?

1. First case
2. Last case
3. No case
4. All cases

22. Which of the following statements is true about break in switch?

1. Optional, but prevents fall-through
2. Mandatory after every case
3. Must be the last line of switch
4. Required only in default

23. Debug the Code:

```
int choice = 2;
switch(choice){
    case 1: System.out.println("Option 1");
    case 2: System.out.println("Option 2");
    default: System.out.println("Default");}
```

1. Option 2
2. Option 2, Default
3. Option 1, Option 2, Default
4. Error

24. Which of these is the correct usage of switch?

1. switch (x > 5)
2. switch ("Hello")
3. switch (x && y)
4. switch (x < 10)

25. Which one is NOT suitable to be implemented using switch-case in Java?

1. Checking age ranges
2. Menu options (1, 2, 3...)
3. Weekday mapping (1–7)
4. Mapping grades A, B, C

26. A jacket originally priced at ₹2,000 is available at a 15% discount. What is the discounted price?

1. ₹1,700
2. ₹1,800
3. ₹1,750
4. ₹1,600

27. A trader gains 20% on selling an item for ₹720. What was the cost price?

1. ₹600
2. ₹580
3. ₹620
4. ₹700

28. A student scored 144 out of 160 in an exam. What percentage did she score?

1. 85%
2. 88%
3. 90%
4. 92%

29. A product costs ₹500. It is first marked up by 25%, then a discount of 10% is given. What is the final selling price?

1. ₹562.50
2. ₹550
3. ₹575
4. ₹600

30. If the price of an item is increased by 20%, by what percent must the consumption be reduced to keep the total expenditure same?

1. 16.67%
2. 20%
3. 18%
3. 25%