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Topic	Switch case and Conditional operator	Last updated on	15 October 2024

- 1. A SWITCH case statement in Java is a ___ control statement.
 - a. Iteration
 - b. Loop
 - c. Selection
 - d. Jump

Ans: c.Selection

Explanation: A switch case statement is used to select one of many code blocks to be executed based on the value of a variable.

- 2. When is the default statement in the switch structure executed?
 - a. When no case matches with the condition
 - b. When a break statement is not used
 - c. Always
 - d. When the variable is null

Ans: a. When no case matches with the condition

Explanation: The default statement is executed if none of the case values match the switch variable.

- 3. What happens if there is no break statement after a case block?
 - a. The program terminates
 - b. The next case block is executed
 - c. An error is thrown
 - d. The default case block is executed

Ans: b.The next case block is executed

Explanation: If no break statement is present, execution continues into the next case, causing a fall-through.

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4. What is the output of the below Java program?

```
int hours = 10;
switch(hours) {
   case 10: System.out.println("TEN"); break;
   case 10: System.out.println("TEN AGAIN"); break;
   default: System.out.println("TEN AS USUAL");
}
```

- a. TEN
- b. TEN AGAIN
- c. TEN AS USUAL
- d. Compiler error

Ans: d. Compiler error

Explanation: The case constant 10 is duplicated, leading to a compiler error.

- 5. What happens if there is no match in the cases in the switch structure and there is no default case?
 - a. The program terminates
 - b. No output is produced
 - c. An error is thrown
 - d. The default case is executed

Ans: b. No output is produced

Explanation: If there's no match and no default case, the switch statement exits without executing any block.

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- 6. Where can a default case be placed in a switch structure?
 - a. Top
 - b. Bottom
 - c. Anywhere
 - d. No default in switch

Ans: c. Anywhere

Explanation: The default case can be placed anywhere in the switch statement.

- 7. What prevents control from continuing to the next case in a switch structure?
 - a. case keyword
 - b. break keyword
 - c. default keyword
 - d. None

Ans: b. break keyword

Explanation: The break keyword stops execution from falling through to the next case.

- 8. A SWITCH fall-through occurs in Java only in the absence of ___.
 - a. case keyword
 - b. break keyword
 - c. default keyword
 - d. None

Ans: b. break keyword

Explanation: A fall-through occurs when there's no break statement after a case.

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- 9. What is the purpose of designing a SWITCH logic with a fall-through in Java?
 - a. To define ranges
 - b. To define additions
 - c. To improve switch block performance
 - d. None

Ans: a. To define ranges

Explanation: Fall-through can be used to execute the same code for multiple cases, effectively defining ranges.

- 10. State TRUE or FALSE. It is allowed to use duplicate case constants inside a Java SWITCH statement.
 - a. FALSE
 - b. TRUE
 - c. Only allowed in certain conditions
 - d. Depends on the Java version

Ans: a. FALSE

Explanation: Each case constant must be unique within a switch statement.

- 11. Choose TRUE or FALSE. A SWITCH can be used to compare values for high or low.
 - a. FALSE
 - b. TRUE
 - c. Only for specific data types
 - d. Only in certain Java versions

Ans: a. FALSE

Explanation: The switch statement only checks for equality, not ranges or conditions like greater than or less than.

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12. State TRUE or FALSE. SWITCH works faster than the IF-ELSE ladder in Java.

- a. FALSE
- b. TRUE
- c. Depends on the number of conditions
- d. Only for integer comparisons

Ans: b.TRUE

Explanation: The switch statement can use a jump table for efficient branching, making it faster than multiple if-else checks.

- 13. Choose the correct statement about Java SWITCH statements.
 - a. A SWITCH can contain another SWITCH statement.
 - b. Switch case statements are allowed inside IF-ELSE ladders.
 - c. Switch statements are allowed inside loops like for, while, and do while.
 - d. All

Ans: d. All

Explanation: All the mentioned structures are valid in Java.

- 14. How can a switch statement be used in Java?
 - a. To iterate over a collection
 - b. To compare two objects
 - c. To conditionally execute code based on a value
 - d. To declare variables

Ans: c.To conditionally execute code based on a value

Explanation: A switch statement is used to execute code based on the value of a variable.

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```
15. What is the output of the Java program below?
```

```
int b = 20;
switch(b) {
  default: System.out.println("LION");
}
```

- a. No output
- b. LION
- c. Compiler error as there are no CASE statements.
- d. None

Ans: b. LION

Explanation: The default case executes when there are no matching cases.

```
16. What is the output of the Java program below?
```

```
int num = 40;
switch(num) {
  case 5: System.out.println("FIVE"); break;
  case 35 + 5: System.out.println("FORTY"); break;
  case 20 + 30: System.out.println("FIFTY");
```

- a. FIVE
- b. FORTY
- c. FIFTY
- d. Compiler error

Ans: b. FORTY

}

Explanation: The case 35 + 5 evaluates to 40, so "FORTY" is printed.

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17. Can you have a duplicate in the cases in the switch structure?

- a. Yes
- b. No
- c. Only in certain conditions
- d. Depends on the Java version

Ans: b. No

Explanation: Duplicate case values are not allowed; each case must have a unique constant.

- 18. Where can a default statement be placed?
 - a. Only at the beginning of the switch structure
 - b. Only at the end of the switch statement
 - c. Anywhere in the switch structure
 - d. Outside the switch structure

Ans: c. Anywhere in the switch structure

Explanation: The default case in a switch statement can be placed anywhere: at the beginning, in the middle, or at the end. This allows flexibility in handling unmatched cases.

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Conditional Operator

- 1. What is the other name for a Question Mark Colon (?:) operator in Java?
 - a. Special Relational operator
 - b. Special Logical Operator
 - c. Ternary Operator
 - d. None

Ans: c. Ternary Operator

Explanation: The ?: operator is commonly referred to as the ternary operator.

- 2. The Java Ternary operator is sometimes called ____.
 - a. Relational Operator
 - b. Conditional Operator
 - c. Logical Operator
 - d. None

Ans: b. Conditional Operator

Explanation: The ternary operator evaluates a condition and returns one of two values based on the result.

- 3. The condition of a Java Ternary operator should evaluate to ____.
 - a. 1 or 0
 - b. true or false
 - c. TRUE or FALSE
 - d. None

Ans: b. true or false

Explanation: The condition must evaluate to a boolean value.

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- 4. State TRUE or FALSE. True expression part comes first after ? (question mark) symbol and before : (colon) symbol.
 - a. FALSE
 - b. TRUE
 - c. Only in specific contexts
 - d. Depends on the data type

Ans: b. TRUE

Explanation: The syntax of the ternary operator is: condition? trueExpression: falseExpression.

- 5. Java Ternary operator can be used with ___.
 - a. if-else statements
 - b. while, do while loops
 - c. for loop, enhanced for loop
 - d. All

Ans: d. All

Explanation: The ternary operator can be used in various contexts, including loops and if-else statements.

- 6. A Java Ternary operator has priority less than ____.
 - a. Relational operators
 - b. Arithmetic operators
 - c. Logical and bitwise operators
 - d. All

Ans: d. All

Explanation: The ternary operator has lower precedence compared to the mentioned operators.

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7.	The True Part Expression of a Java conditional operator or Ternary operator
	returns a value

- a. may
- b. can
- c. must
- d. None

Ans: c. must

Explanation: The true part must return a value, as it is part of the operator's functionality.

- 8. The False Part Expression of a Java conditional operator or Ternary operator _____ returns a value.
 - a. may
 - b. can
 - c. must
 - d. None

Ans: c. must

Explanation: The false part also must return a value.

- 9. Which part comes first after'?' Symbol and before ':' in conditional operator?
 - a. True part
 - b. False part
 - c. Only in specific context
 - d. Depends on the data type

Ans: a. True part

Explanation: In the conditional operator (?:), the part after ? is executed if true, and the part after : is executed if false.

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10. What is the output of the Java code snippet with a Ternary operator?

String name = "cat";

int marks = name == "Cat" ? 10 : 20;

System.out.println("Marks=" + marks);

- a. Marks=0
- b. Marks=10
- c. Marks=20
- d. Compiler error

Ans: c. Marks=20

Explanation: The comparison name == "Cat" evaluates to false because string comparison should use .equals(), thus it returns 20.

11. What is the output of the Java code snippet with Ternary operator?

String name = "java"; int marks = name == "java" ? 10 : 20; System.out.println("Marks=" + marks);

- a. Marks=0
- b. Marks=10
- c. Marks=20
- d. Compiler error

Ans: b. Marks=10

Explanation: The comparison name == "java" evaluates to true, so it returns 10.