

## **TypeScript Data Types and Operators - Quiz**

**1. What is a key difference between JavaScript and TypeScript?**

- a) JavaScript is statically typed, TypeScript is dynamically typed
- b) JavaScript is dynamically typed, TypeScript is statically typed
- c) Both are dynamically typed
- d) Both are statically typed

**2. What happens when you assign a string to a number variable in TypeScript?**

- a) No error, TypeScript allows it
- b) Error: Type mismatch
- c) It converts the string to a number
- d) It converts the number to a string

**3. Which of the following is NOT a primitive data type in TypeScript?**

- a) number
- b) boolean
- c) array
- d) string

**4. What is the output of `console.log("5" + 3);` in JavaScript?**

- a) 8
- b) "53"
- c) 5
- d) Error

**5. What does the `any` type in TypeScript do?**

- a) Forces strict typing
- b) Disables type checking
- c) Converts all values to strings
- d) Throws an error on type mismatch

**6. What is the inferred type of `let value = 10;` in TypeScript?**

- a) number
- b) string
- c) boolean
- d) any

**7. Which symbol is used for Union Types in TypeScript?**

- a) &
- b) |
- c) \$
- d) #

**8. What is the default value of an uninitialized variable in TypeScript?**

- a) null
- b) 0
- c) undefined
- d) false

**9. Which operator is used for exponentiation in TypeScript?**

- a) ^
- b) \*\*
- c) \*
- d) //

**10. What does the void type in TypeScript indicate?**

- a) The function returns an integer
- b) The function returns nothing
- c) The function returns a string
- d) The function throws an error

**11. Which of the following is a correct way to declare a boolean in TypeScript?**

- a) let flag: boolean = true;
- b) let flag = Boolean(true);
- c) let flag: bool = true;
- d) let flag: boolean = "true";

**12. What is the result of 10 % 3 in TypeScript?**

- a) 1
- b) 3
- c) 10
- d) 0

**13. Which of the following is NOT a comparison operator in TypeScript?**

- a) ==
- b) ===
- c) =
- d) !==

**14. What is the function of the ! (NOT) operator?**

- a) Converts a boolean to its opposite value
- b) Multiplies numbers
- c) Checks for strict equality
- d) Converts a string to a number

**15. What does x++ do?**

- a) Increments x by 2
- b) Increments x by 1 after the expression is evaluated

- c) Increments x by 1 before the expression is evaluated
- d) Doubles the value of x

**16. What does `x += 5` mean?**

- a) `x = x + 5`
- b) `x = 5`
- c) `x = x * 5`
- d) `x = x / 5`

**17. Which operator checks both value and type equality?**

- a) `==`
- b) `===`
- c) `!=`
- d) `=`

**18. What is the result of `true && false`?**

- a) `true`
- b) `false`
- c) `null`
- d) `undefined`

**19. Which operator returns true if at least one condition is true?**

- a) `&&`
- b) `||`
- c) `!`
- d) `===`

**20. Which type should be used when a function does not return any value?**

- a) `number`
- b) `undefined`
- c) `any`
- d) `void`

**21. What is the main advantage of TypeScript over JavaScript?**

- a) More complex syntax
- b) Static typing for better error detection
- c) It runs faster than JavaScript
- d) Requires no compilation

**22. What is the correct way to declare an array in TypeScript?**

- a) `let numbers: number[] = [1, 2, 3];`
- b) `let numbers = new Array(1, 2, 3);`
- c) `let numbers: array = [1, 2, 3];`
- d) `let numbers: Array[number] = [1, 2, 3];`

**23. What is a tuple in TypeScript?**

- a) A function
- b) An array with fixed types and order
- c) A class instance
- d) A primitive type

**24. What will `console.log(10 >= 5)` print?**

- a) true
- b) false
- c) undefined
- d) NaN

**25. Which operator is used for conditional (ternary) expressions?**

- a) `&&`
- b) `||`
- c) `? :`
- d) `===`

**26. What is the result of `5 === "5"`?**

- a) true
- b) false
- c) Error
- d) undefined

**27. Which keyword is used to declare a constant variable in TypeScript?**

- a) `var`
- b) `let`
- c) `const`
- d) `static`

**28. Which of the following is NOT a valid TypeScript data type?**

- a) `string`
- b) `number`
- c) `bool`
- d) `undefined`

**29. What is the result of `typeof null` in JavaScript?**

- a) `"null"`
- b) `"object"`
- c) `"undefined"`
- d) `"number"`

**30. How do you declare a function that returns a number?**

- a) `function getNumber(): number { return 5; }`
- b) `function getNumber { return 5; }`
- c) `function getNumber() { return 5; }`
- d) `function getNumber(): void { return 5; }`

**Answers:**

1. b 2) b 3) c 4) b 5) b 6) a 7) b 8) c 9) b 10) b
2. a 12) a 13) c 14) a 15) b 16) a 17) b 18) b 19) b 20) d
3. b 22) a 23) b 24) a 25) c 26) b 27) c 28) c 29) b 30) a