JavaScript Quiz

Variables and Operators

1. **What is the output of the following code?**

```
let a = 1;
let b = 0;
while (a <= 3) {
    a++;
    b += a * 2;
}
console.log(b);
```

   (a) 10
   (b) 12
   (c) 14
   (d) 18

2. **What does the following code output?**

```
let x = 0;
let y = '0';
console.log(x == y, x === y);
```

   (a) true false
   (b) false true
   (c) true true
   (d) false false

3. **Given the following code, what is the value of `x` after execution?**

```
let x = 3;
x += (x *= 2);
```

   (a) 6
   (b) 9
   (c) 12
   (d) 15

Control Statements

4. **What will the following code output?**

```
for (let i = 0; i < 3; i++) {
    setTimeout(() => console.log(i), 1000);
}
```

   (a) 0 1 2
   (b) 3 3 3
   (c) 0 1 2 3
   (d) undefined undefined undefined

5. **What is the output of this code?**

```
let x = 10;
if (x = 5) {
    console.log(x);
} else {
    console.log(x * 2);
}
```

   (a) 5
   (b) 10
   (c) 20
   (d) 0

Loops

6. **How many times will the loop execute?**

```
let count = 0;
for (let i = 1; i <= 5; i++) {
    for (let j = i; j <= 5; j++) {
        count++;
    }
}
console.log(count);
```

   (a) 5
   (b) 10
   (c) 15
   (d) 20

7. **What is the output of the following code?**

```
let result = '';
for (let i = 0; i < 4; i++) {
    for (let j = 0; j < i; j++) {
        result += '*';
    }
}
console.log(result);
```

(a) ***
(b) ****
(c) ******
(d) ********

Functions

8. **What will be logged to the console?**

```
function foo(a, b = 4, c = 8) {
    return a + b + c;
}
console.log(foo(2));
```

(a) 14
(b) 10
(c) 6
(d) 2

9. **What is the output of this code?**

```
(function(x) {
    return (function(y) {
        console.log(x);
    })(2);
})(1);
```

(a) 1
(b) 2
(c) undefined
(d) ReferenceError

Objects

10. **What will the following code output?**

```
const person = {
    name: 'John',
    greet: function() {
        console.log(this.name);
    }
};
const greet = person.greet;
greet();
```

(a) John

(b) undefined

(c) ReferenceError

(d) null

11. **What is the output of this code?**

```
const obj = {
    a: 1,
    b: {
        c: 2,
        d: 3
    }
};
const { a, b: { c } } = obj;
console.log(a, c);
```

(a) 1 2

(b) 1 3

(c) undefined 2

(d) undefined 3

Arrays

12. **What will the following code output?**

```
const arr = [1, 2, 3, 4];
const result = arr.reduce((acc, val) => acc + val, 0);
console.log(result);
```

(a) 10

(b) 9

(c) 8

(d) 7

13. **What is the output of this code?**

```
const arr = [1, 2, 3];
arr[10] = 99;
console.log(arr.length);
```

(a) 3

(b) 4

(c) 11

(d) 10

DOM

14. **What will the following code output?**

```
document.body.innerHTML = '<div id="test">Hello</div>';
const el = document.getElementById('test');
console.log(el.textContent);
```

(a) Hello

(b) undefined

(c) null

(d) ReferenceError

15. **How can you select all elements with the class name 'item'?**

(a) `document.querySelector('.item')`

(b) `document.querySelectorAll('.item')`

(c) `document.getElementsByClassName('item')`

(d) Both b and c

16. **What does the following code output?**

```
let a = [1, 2, 3];
let b = [1, 2, 3];
console.log(a == b, a === b);
```

(a) true true

(b) false false

(c) true false

(d) false true

17. **What will be the result of this code?**

```
function test() {
    console.log(a);
    console.log(foo());
    var a = 1;
    function foo() {
        return 2;
    }
}
test();
```

(a) undefined, 2

(b) ReferenceError, 2

(c) undefined, undefined

(d) 1, 2

18. **What does the following code output?**

```
const a = {};
const b = { key: 'b' };
const c = { key: 'c' };
a[b] = 123;
a[c] = 456;
console.log(a[b]);
```

(a) 123

(b) 456

(c) undefined

(d) TypeError

19. **What will the following code output?**

```
let x = [1, 2, 3];
let y = x;
x = [4, 5, 6];
console.log(y);
```

(a) [1, 2, 3]

(b) [4, 5, 6]

(c) undefined

(d) TypeError

20. **What will the following code output?**

```
const obj1 = { key: 'value' };
const obj2 = obj1;
obj2.key = 'newValue';
console.log(obj1.key);
```

(a) value

(b) newValue

(c) undefined

(d) TypeError