Quiz

1. What is the scope of a var variable in TypeScript?

a) Block scope
b) Function scope
c) Module scope
d) Class scope

2. Which keyword allows variable redeclaration in TypeScript?

a) var
b) let
c) const
d) None of the above

3. What is the output of the following code?

```
var x = 10;
var x = 20;
console.log(x);
```

a) 10
b) 20
c) Error: Cannot redeclare variable
d) Undefined

4. What is the scope of a let variable?

a) Function scope
b) Global scope
c) Block scope
d) Both a and c

5. Can a let variable be reinitialized?

a) Yes
b) No

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6. What happens if you try to redeclare a let variable in the same scope?

a) It works fine
b) It throws an error
c) The previous value is overwritten
d) Undefined behavior

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7. What is the output of the following code?

```
let y = 5;
y = 10;
console.log(y);
```

a) 5
b) 10
c) Error: Cannot reassign
d) Undefined

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8. What is the output of the following code?

```
let a = 100;
let a = 200;
console.log(a);
```

a) 100
b) 200
c) Error: Cannot redeclare block-scoped variable
d) Undefined

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9. Can a const variable be reinitialized?

a) Yes
b) No

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10. What happens if you do not assign a value to a const variable at the time of declaration?

a) It gets assigned undefined
b) It throws an error
c) It gets assigned null
d) It works fine without an error

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11. What is the output of the following code?

```
const num;
num = 30;
console.log(num);
```

a) 30
b) Undefined
c) Error: Missing initializer in const declaration
d) Null

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12. What is the scope of a const variable?

a) Function scope
b) Block scope
c) Global scope
d) Both b and c

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13. Which keyword should be used when you do not want a variable to be reassigned?

a) var
b) let
c) const
d) Both let and const

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14. What happens if you try to reassign a const variable?

a) The previous value is overwritten
b) It throws an error

c) The value remains unchanged
d) The variable is set to undefined

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15. Which of the following statements about var, let, and const is TRUE?

a) var is block-scoped
b) let variables can be redeclared in the same scope
c) const variables must be initialized at the time of declaration
d) let variables cannot be reinitialized

Answers:

1. **b) Function scope**
2. **a) var**
3. **b) 20**
4. **c) Block scope**
5. **a) Yes**
6. **b) It throws an error**
7. **b) 10**
8. **c) Error: Cannot redeclare block-scoped variable**
9. **b) No**
10. **b) It throws an error**
11. **c) Error: Missing initializer in const declaration**
12. **d) Both b and c**
13. **c) const**
14. **b) It throws an error**
15. **c) const variables must be initialized at the time of declaration**