

Question 1:

```
let x;  
var a = 5;  
var b = 10;  
var c = function(a, b, c) {  
    document.write(x);  
    document.write(a);  
    var f = function(a, b, c) {  
        b = a;  
        document.write(b);  
        b = c;  
        var x = 5;  
    }  
    f(a,b,c);  
    document.write(b);  
    var x = 10;  
}  
  
c(8,9,10);  
document.write(b);  
document.write(x);
```

1. Output:

undefined

8

8

9

10

undefined

2. Lexical Environment Diagram

1. Global EC creation:

Outer: null, LE: [{a: undefined, b: undefined, c: undefined}], TDZ{x}

2. Global EC execution:

Outer: null, LE: [{x: undefined, a: 5, b: 10, c: fn}], TDZ{}

3. C FEC creation:

Outer: Global, LE: [{x: undefined, a: 8, b: 9, c: 10, f: undefined}], TDZ{}

4. C FEC execution:

Outer: Global , LE: [{x: 10, a: 8, b: 9, c: 10, f: fn}], TDZ{}

5. F FEC creation:

Outer: C, LE: [{x: undefined, a: 8, b: 9, c: 10}], TDZ{}

6. F FEC execution:

Outer: C , LE: [{x: 5, a: 8, b: 10, c: 10}], TDZ{}

Question 2:

```
var x = 9;
function myFunction() {
    return x * x;
}
document.write(myFunction());
x = 5;
document.write(myFunction());
```

1. Output

81

25

2. Lexical Environment Diagram

1. Global EC creation:

Outer: null, LE: [{x: undefined, myFunction: fn}], TDZ{}

2. Global EC execution:

Outer: null, LE: [{ x: 9, myFunction : fn}], TDZ{}

3. myFunction FEC creation:

Outer: Global, LE: [{}], TDZ{}

4. myFunction FEC execution:

Outer: Global, LE: [{}], TDZ{}

5. Global EC execution:

Outer: Global, LE: [{x: 5}], TDZ{}

3. myFunction FEC creation:

Outer: Global, LE: [{}], TDZ{}

4. myFunction FEC execution:

Outer: Global, LE: [{}], TDZ{}

Question 3:

```
var foo = 1;
function bar() {
    if (!foo) {
        var foo = 10;
    }
    alert(foo);
}
bar();
```

1. Output

10

2. Lexical Environment Diagram

1. Global EC creation:

Outer: null, LE: [{foo: undefined, bar: fn}], TDZ{}

2. Global EC execution:

Outer: null, LE: [{foo : 1, bar : fn}], TDZ{}

3. bar FEC creation:

Outer: Global, LE: [{foo: undefined}], TDZ{}

4. bar FEC execution:

Outer: Global, LE: [{ foo: 10}], TDZ{}