1. What is the result of the following code?

```
console.log(true && false);
```

   a) `true`

   b) `false`

   c) `undefined`

   d) `null`

2. What does the following code output?

```
console.log(false || true);
```

   a) `true`

   b) `false`

   c) `undefined`

   d) `null`

3. What is the value of `result`?

```
const result = !true;
console.log(result);
```

   a) `true`

   b) `false`

   c) `undefined`

   d) `null`

4. What will be logged to the console?

```
console.log(10 > 5 && 3 < 4);
```

   a) `true`

   b) `false`

   c) `undefined`

   d) `null`

5. What will the following code output?

```
console.log(5 === 5 || 5 > 10);
```

a) `true`

b) `false`

c) `undefined`

d) `null`

6. What is the result of this code?

```
const x = false;
const y = true;
console.log(x && y || !x);
```

a) `true`

b) `false`

c) `undefined`

d) `null`

7. What does this code evaluate to?

```
console.log(!!(5 > 3));
```

a) `true`

b) `false`

c) `undefined`

d) `null`

8. What will `result` be?

```
const result = false || 0 || "hello";
console.log(result);
```

a) `false`

b) `0`

c) `"hello"`

d) `undefined`

9. What will the following code return?

```
console.log(null && "JavaScript");
```

a) `null`

b) `"JavaScript"`

c) `true`

d) `false`

10. What does this code output?
```
console.log(true || false && false);
```

a) `true`

b) `false`

c) `undefined`

d) `null`

11. What is the result of the following expression?
```
console.log(!("hello" && 0));
```

a) `true`

b) `false`

c) `null`

d) `undefined`

12. What will be logged?
```
console.log(10 || 0 && 5); //0 && 5 evaluated 1st
```

a) `10`

b) `0`

c) `5`

d) `false`

13. What will `result` be?
```
const result = "abc" && "def" || "";

console.log(result);
```

a) `"abc"`

b) `"def"`

c) `""`

d) `undefined`

14. What does this code evaluate to?
```
console.log(3 > 2 && 2 > 4);
```

a) `true`

b) `false`

c) `undefined`

d) `null`

15. What will the following code return?
```
console.log(false || NaN || undefined);
```

a) `false`

b) `NaN`

c) `undefined`

d) `null`

#scenario-based questions

1. Eligibility Check

Write a condition to check if a student is eligible for a scholarship. The criteria are:
- The student's grade is `A` or `B`.
- The student's attendance is above 75%.
print `"Eligible"` or `"Not Eligible"`

```
var percentage=+window.prompt("Enter your attendance in number")

var grade=window.prompt("Enter your grade in capitals")

if (percentage>=75 && (grade=="A" || grade=="B")  ){

   document.write("Youre Eligible for Scholarship")

}
```

```
else{
   document.write("Not Eligible for Scholarship")
}
```

---

2. Age Group Classification

Classify a person based on their age:
- If the age is less than 13, they are a “Child”.
- If the age is between 13 and 19 (inclusive), they are a “Teenager”.
- Otherwise, they are an “Adult”.

```
var age=20
if (age<13){
   console.log("Child")
}
else{
   if(age>=13 && age<=19){
      console.log("Teenager")
   }
   else{
      console.log("Adult")
   }
}
```

OUTPUT : Adult

---

3. Login Status

Check the login status of a user. A user is considered logged in if:
- `isLoggedIn` is `true`.
- Their session is active (`sessionActive` is `true`).

Use a conditional statements to log `"Welcome Back"` if the user is logged in and `"Please Log In"` otherwise.

```
var isLoggedIn = false;
var sessionActive = true;
```

```
if (isLoggedIn && sessionActive) {
   console.log("Welcome Back");
} else {
   console.log("Please Log In");
}
//OUTPUT : Please Log In
```

---

4. Grade Evaluation

Assign a letter grade based on a student's score:
- Scores 90 and above: `"A"`.
- Scores between 80 and 89: `"B"`.
- Scores between 70 and 79: `"C"`.
- Scores below 70: `"Fail"`.

Use conditional statements to determine the grade.

```
var score=+window.prompt("Enter Your Score")
if(score >=90){
   document.write("A")
}
else if(score >=80 && score <=89){
   document.write("B")
}
else if(score >=70 && score <=79){
   document.write("C")
}
else{
   document.write("Fail")
}
```

---

5. Product Discount Validation

Determine the discount for a product based on the following criteria:
- If the product price is greater than `$100`, the discount is `20%`.
- Otherwise, the discount is `10%`.
Use a conditional statements to set the discount percentage.

```
var price=300

if(price >=100){

   console.log("You’re discount is 20% for the product price",price)

}

else{

   console.log("You’re discount is 10% for the product price",price)

}
```
