1. What is the result of the following code?

* console.log(**true** && **false**);
  1. true
  2. false
  3. undefined
  4. null

ans: b)false

1. What does the following code output?

* console.log(**false** || **true**);
  1. true
  2. false
  3. undefined
  4. null

ans: a)true

1. What is the value of result?

* **const** result = !**true**;  
  console.log(result);
  1. true
  2. false
  3. undefined
  4. null

ans: b)false

1. What will be logged to the console?

* console.log(10 > 5 && 3 < 4);
  1. true
  2. false
  3. undefined
  4. null

ans: a)true

1. What will the following code output?

* console.log(5 === 5 || 5 > 10);
  1. true
  2. false
  3. undefined
  4. null

ans: a) true

1. What is the result of this code?

* **const** x = **false**;  
  **const** y = **true**;  
  console.log(x && y || !x);
  1. true
  2. false
  3. undefined
  4. null

ans: a)true

1. What does this code evaluate to?

* console.log(!!(5 > 3));
  1. true
  2. false
  3. undefined
  4. null

ans: a) true

1. What will result be?

* **const** result = **false** || 0 || "hello";  
  console.log(result);
  1. false
  2. 0
  3. "hello"
  4. undefined

ans: c) “hello”

1. What will the following code return?

* console.log(**null** && "JavaScript");
  1. null
  2. "JavaScript"
  3. true
  4. false

ans: a) null

1. What does this code output?  
   console.log(true || false && false);
   1. true
   2. false
   3. undefined
   4. null

ans: a) true

1. What is the result of the following expression?  
   console.log(!("hello" && 0));
   1. true
   2. false
   3. null
   4. undefined

ans: a) true

1. What will be logged?  
   console.log(10 || 0 && 5);
   1. 10
   2. 0
   3. 5
   4. false

ans: a) 10

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

console.log(result);

* 1. "abc"
  2. "def"
  3. ""
  4. undefined

ans: b) “def”

1. What does this code evaluate to?  
   console.log(3 > 2 && 2 > 4);
   1. true
   2. false
   3. undefined
   4. null

ans: b) false

1. What will the following code return?  
   console.log(false || NaN || undefined);
   1. false
   2. NaN
   3. undefined
   4. null

ans: b) NaN

**#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%.  
Use a ternary operator to assign "Eligible" or "Not Eligible" to a variable.

ans: var grade = "A";

var attendance = 80;

var eligibility = ( (grade === "A" || grade === "B") && attendance > 75)

? "Eligible"

: "Not Eligible";

console.log(eligibility);

### 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”.  
Use nested ternary operators to determine the classification.

ans: var age = 15;

var classification = (age < 13)

? "Child"

: (age >= 13 && age <= 19)

? "Teenager"

: "Adult";

console.log(classification);

### 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 ternary operator to log "Welcome Back" if the user is logged in and "Please Log In" otherwise.

ans: var isLoggedIn = true;

const sessionActive = true;

const loginStatus = (isLoggedIn && sessionActive)

? "Welcome Back"

: "Please Log In";

console.log(loginStatus);

### 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 nested ternary operators to determine the grade.

ans: var score = 85;

var grade = (score >= 90)

? "A"

: (score >= 80 && score < 90)

? "B"

: (score >= 70 && score < 80)

? "C"

: "Fail";

console.log(grade);

### 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 ternary operator to set the discount percentage.

ans: var price = 120;

var discount = (price > 100)

? 20

: 10;

console.log(`${discount}%`);