1.   Print Numbers Write a for loop to print numbers from 1 to 10 in the console.
```
for ( var i = 1; i <=10; i++) {
    console.log(i)
}
```
2.   Sum of Numbers Write a for loop to calculate the sum of the first 5 natural numbers (1, 2, 3, 4, 5) and display the result.
```
var sum=0;
for ( var i = 1; i <=5; i++) {
    sum= sum + i
}
console.log(sum)
```
3.   Even Numbers Write a for loop to print all even numbers between 1 and 20.
```
for (var x =2; x<=20; x+=2){
console.log(x)
}
```
4.   Reverse Counting Write a for loop to print numbers from 10 to 1 in descending order.
```
for ( var y = 10; y>=1; y--) {
    console.log(y)
}
```
5.   Multiplication Table Write a for loop to print the multiplication table of 5 (from 5 × 1 to 5 × 10).
```
for (var z=5; z<=50; z+=5){
console.log(z)
}
```

Basic Level:

6.   What is the starting point of a basic `for` loop in JavaScript?   Ans: A B C D

   -

        A) `for (let i = 1; i < 10; i++)`

   -

        B) `for (let i = 0; i < 10; i++)`

   -

        C) `for (let i = 0; i <= 10; i++)`

   -

        D) `for (let i = 1; i <= 10; i++)`

7.   What part of the `for` loop controls how many times the loop executes?   Ans: D

- A) Initialization

- B) Condition

- C) Increment/Decrement

- D) All of the above

8. What will be the output of the loop? Ans: A

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

- A) 0, 1, 2, 3, 4

- B) 1, 2, 3, 4, 5

- C) 1, 2, 3, 4

- D) 0, 1, 2, 3, 4, 5

4. Can a `for` loop be used without a condition? Ans: A

- A) Yes

- B) No

5. What is the significance of the increment part of the `for` loop? Ans: C

- A) It checks the condition.

- B) It initializes the loop.

- C) It changes the loop variable each iteration.

- D) It ends the loop.

6. What will be the output of the following code? Ans : A

```
for (let i = 5; i > 0; i--) {
   console.log(i);
   }
```

  –

        A)   5, 4, 3, 2, 1

  –

        B)   1, 2, 3, 4, 5

  –

        C)   4, 3, 2, 1

  –

        D)   5, 4, 3, 2, 1, 0

7.   Can the loop variable be modified inside the `for` loop body?   Ans: A

  –

        A)   Yes

  –

        B)   No

8.   What happens if the condition in the `for` loop is always `true`? Ans: A

  –

        A)   Loop runs indefinitely.

  –

        B)   Loop will never run.

  –

        C)   Loop runs once.

  –

        D)   Loop exits immediately.

9.   What does the loop do?   Ans: A

```
for (let i = 3; i < 10; i += 2) {   console.log(i);
   }
```

  –

     A)   3, 5, 7, 9

  –

     B)   4, 6, 8, 10

  –

     C)   5, 7, 9

  –

D) 3, 4, 5, 6

10. What will happen in this code?   Ans: B

```
for (let i = 0; i < 3; i++) {    let
   i = 5;
     console.log(i);
   }
```

  –

        A)   0, 1, 2

  –

        B)   5, 5, 5

  –

        C)   Error

  –

        D)   Infinite loop

Intermediate Level:

11. What is the scope of the variable i in a for loop?   Ans: B

  –

        A)   Global

  –

        B)   Local to the block

  –

        C)   Local to the function

  –

        D)   None

12. Which of the following is a valid for loop?   Ans: B

  –

                     A)   for (let i = 0;; i++)

  –

                     B)   for (let i = 0, i < 5, i++)

  –

-

      C)   `for (i = 0; i < 5; i++)`

      D)   `for (i == 0; i < 5; i++)` 13. How can you skip the current iteration in a `for` loop?   Ans: A

-

      A)   `continue`
;
-

      B)   `break;`

-

      C)   `return;`

-

      D)   `exit;` 14. How can you stop the execution of a `for` loop before it completes all iterations?

                                    Ans: C

-

A)   `continue;`

-

B)   `stop;`

-

C)   `break;`

-

D)   `exit;`
15. What happens if the increment is missing in the `for` loop?   Ans: A

-

      A)   Infinite loop

-

      B)   Syntax error

-

      C)   Loop runs once

–

–

D) No iteration occurs 16. What will be the output?

Ans: B

```javascript
for (let i = 0; i < 5; i += 2) {
  console.log(i);
}
```

–

A) 0, 1, 2, 3, 4

–

B) 0, 2, 4

C) 0, 2 –
D) 2, 4 17. What will happen?

Ans: A

```javascript
for (let i = 0; i < 3; i++)    for
  (let j = 0; j < 2; j++)
  console.log(i + j);
```

–

A) 0, 1, 1, 2, 2,	2
– B) 0, 1, 1, 2, 2, 3,	6
–	6
C) 0, 1, 1, 2, 2, 3, 3,	7
– D) 0, 1, 2, 3,	9

18. What will the following loop output?   Ans: A

```javascript
for (let i = 0; i <= 10; i++) {
  if (i === 5) break;
  console.log(i);
}
```

–

A) 0, 1, 2, 3, 4

–

B) 0, 1, 2, 3, 4, 5

-

-

C) 0, 1, 2, 3, 4, 5, 6

-

D) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

19. What will the following code do?   Ans: A

```
for (let i = 1; i <= 10; i *= 2) {   console.log(i);
  }
```

-

A)   1, 2, 4, 8

-

B)   1, 3, 5, 7, 9

-

C)   2, 4, 8

D)   1, 2, 3, 4 20. What will this for loop do?

Ans: A

```
for (let i = 10; i >= 0; i -= 3) {   console.log(i);
  }
```

-

A)   10, 7, 4, 1

-

B)   10, 8, 6, 4

-

C)   10, 9, 8, 7

-

D)   Error

Advanced Level:

21. How many times will the following loop run?   Ans: D

```
for (let i = 0; i !== 10; i += 3) {   console.log(i);
  }
```

-

–

A) 4

–

B) 5

–

C) 6

–

D) Infinite 22. What will this loop print?

Ans: C

```javascript
for (let i = 0; i < 3; i++) {    if
    (i % 2 === 0) continue;
    console.log(i);
}
```

–

A) 1, 2

–

B) 0, 2

- C) 1

- D) 0, 1, 2

23. Can the `for` loop header be empty?   Ans: A

```
for (;;) {
    // some code
}
```

- A) Yes

- B) No 24. How can the following code be corrected?   Ans: E

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

- A) Add a semicolon after `i++`.

- B) Remove `let`.

- C) Add a comma between statements.

- D) Add parentheses around `i++`.

- E) Add a semi colon before `i++`.

25. What is the output?   Ans: A

```
for (let i = 0; i <= 3; i++, console.log(i));
```

- A) 1, 2, 3, 4

- B) 0, 1, 2, 3, 4

- C) 0, 1, 2, 3

-

D) 1, 2 , 3

26. What will be the final value of i in this code?   Ans: B

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

- A) 4

- B) 5

- C) 6

- D) Undefined 27. What will happen in this loop?
Ans: A

```
for (let i = 0; i < 10; i = i + 3) {    console.log(i);
  }
```

- A) 0, 3, 6, 9

- B) 1, 4, 7, 10

- C) Infinite loop

- D) Syntax error 28. How many times will this loop
run?   Ans: A

```
for (let i = 5; i <= 10; i += 2) {}
```

- A) 3

- B) 4

- C) 5

- D) Infinite 29. What will the following code print?
Ans: C

```
for (let i = 0; i < 10; i++) {   if
   (i % 3 === 0) {
   console.log(i);

     }
}
```

—

A)   1, 2, 3, 6, 9

—

B)   3, 6, 9

—

C)   0, 3, 6, 9

—

D)   0, 2, 4, 6

30. What happens when the loop has no initialization?   Ans: D

```
for (; i < 5; i++) {
   console.log(i);
   }
```

—

A)   Error

—

B)   Infinite loop

—

C)   0, 1, 2, 3, 4

—

D)   Depends on the scope of i 31. What will the
following code do?   Ans: A

```
for (let i = 1; i < 20; i *= 3) {   console.log(i);
   }
```

—

A)   1, 3, 9

—

B)   1, 2, 4, 8

—

C)   1, 3, 6, 9

—

D)   Infinite loop

32. How does the `for` loop differ from the `while` loop in terms of syntax? Ans:A

    –
                        A)   Initialization happens outside the loop in `while`.

    –
                        B)   `while` loop is more optimized.

    –
                        C)   `for` loop doesn't require a condition.

    –
                        D)   `while` loop can't be nested.

33. What will happen if there is no update statement in the `for` loop?   Ans: B

    –
                        A)   Loop will run once.

    –
                        B)   Infinite loop.

    –
                        C)   Loop won't run at all.

    –
                        D)   Syntax error.

34. How many times does this loop run?   Ans: D

```
for (let i = 0; i++ < 5;) {}
```

    –
                        A)   4

    –
                        B)   5

    –
                        C)   6

    –
                        D)   Infinite 35. What is the result of this code?
          Ans: B

```
for (let i = 5; i; i--) {
   console.log(i);
}
```

    –
                A)   4, 3, 2, 1

    –

B) 5, 4, 3, 2, 1

–

C) 4, 3, 2, 1, 0

–

D) Infinite loop

36. What will the following loop print?   Ans: A

```
for (let i = 1; i <= 3; i++) {
   for (let j = 1; j <= 2; j++) {
   console.log(i, j);
   }
}
```

–

A) 1, 1; 1, 2; 2, 1; 2, 2; 3, 1; 3, 2

–

B) 1, 2; 2, 2; 3, 2

–

C) 1, 2; 2, 1; 3, 2

–

D) Syntax error

37. How many times will the inner loop run in this code?   Ans:

```
for (let i = 0; i < 4; i++) {    for
   (let j = 0; j < 3; j++) {
   console.log(i, j);
   }
}
```

–

A) 4

–

B) 7

–

C) 12

–

D) 10 38. How many total iterations will both loops
run?   Ans: C

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

–

A) 15

–

B) 10

–

C) 12

–

D) 20 39. What is printed by the following loop?

Ans: A

```
for (let i = 2; i <= 4; i++) {
    for (let j = 1; j < i; j++) {
    console.log(i, j);
      }
    }
```

–

A) 2, 1; 3, 1; 3, 2; 4, 1; 4, 2; 4, 3

–

B) 2, 1; 3, 2; 4, 3

–

C) 2, 2; 3, 3; 4, 4

–

D) 1, 2; 2, 3

40. How many iterations will this loop combination execute?   Ans: B

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

–

A) 9

–

B) 6

–

C)   5

–

D)   3 41. What is the final output of this nested loop?

Ans:

```
let result = ''; for (let i = 0; i
   < 3; i++) {    for (let j = 0; j
   < 3; j++) {     result += i +
   '' + j + ' ';
   }
}
console.log(result);
```

–

A)   "000 011 022"

–

B)   "00 01 02 10 11 12 20 21 22"

–

C)   "012 012 012"

–

D)   Infinite loop 42. What does this code output?

Ans: A

```
for (let i = 1; i <= 2; i++) {
   for (let j = 1; j <= 3; j++) {
   if (i + j === 4) {
   console.log(i, j);
     }
   }
}
```

–

A)   1, 3; 2, 2

–

B)   1, 1; 2, 3

–

C)   2, 1; 1, 2

–

D)   1, 2; 2, 1

43. What will happen when the following nested loop is executed?   Ans: A

```
for (let i = 0; i < 3; i++) {    for
    (let j = 0; j < 2; j++) {      if
    (j === 1) break;
    console.log(i, j);
      }
    }
```

-

    A)   0, 0; 1, 0; 2, 0

-

    B)   0, 1; 1, 1; 2, 1

-

    C)   0, 1; 1, 0

-

    D)   Infinite loop

44. What does this loop combination output?   Ans: B

```
for (let i = 1; i <= 3; i++) {
    for (let j = 1; j <= 2; j++) {
    if (i === 2) continue;
    console.log(i, j);
      }
    }
```

-

    A)   1, 1; 1, 2; 2, 1; 2, 2; 3, 1; 3, 2

-

    B)   1, 1; 1, 2; 3, 1; 3, 2

-

    C)   1, 2; 2, 1; 3, 2

-

    D)   Infinite loop

45. What will the output be for this nested loop setup?   Ans: A

```
let output = ''; for (let i = 1; i
    <= 3; i++) {    for (let j = i; j
    <= 3; j++) {      output += i +
    '' + j + ' ';
      }
    }
    console.log(output);
```

-

A) 11 12 13 22 23 33

–

B) "12 23 34"

–

C) "12 13 23"

–

D) Infinite loop

46. How many times will the inner loop execute in total?   Ans: A

```javascript
for (let i = 0; i < 4; i++) {   for
   (let j = i; j >= 0; j--) {
   console.log(i, j);
     }
   }
```

–

A) 10

–

B) 5

–

C) 4

–

D) 8

47. What does this code print?   Ans: C

```javascript
let counter = 0; for (let i = 0; i
   < 4; i++) {   for (let j = 0; j
   < 2; j++) {   counter++;
     }
   }
   console.log(counter);
```

–

A) 2

–

B) 4

–

C) 8

–

D) 6 48. What is printed by this code?

Ans: C

```
for (let i = 1; i <= 2; i++) {
    for (let j = 1; j <= 2; j++) {
    if (i === j) break;
    console.log(i, j);
      }
    }
```

–

      A) 1, 2; 2, 1

–

      B) 1, 1; 2, 2

–

      C) 2, 1

–

      D) Infinite loop

49. What happens in the following nested loop?   Ans: E

```
for (let i = 3; i > 0; i--) {    for
    (let j = 3; j > i; j--) {
    console.log(i, j);
      }
    }
```

–

      A) 3, 2; 2, 1; 1, 0

–

      B) 2, 3; 1, 2; 1, 3

–

      C) 1, 2; 1, 3

–

      D) 3, 2; 3, 1
      E) 2 3 1 3 1 2

50. How many total times does the loop run in this code?   Ans: B

```
for (let i = 0; i < 3; i++) {    for
    (let j = 0; j < 3; j++) {     if
    (i === 2) break;
    console.log(i, j);
      }
    }
```

–

      A) 9

–

        B)   6

–

        C)   4

–

        D)   5