Quiz on Arrays & strings

1. What does the push() method do in TypeScript?

   o   A) Removes the last element of an array

   o   B) Adds one or more elements to the end of an array

   o   C) Adds one or more elements to the beginning of an array

   o   D) Removes the first element of an array

2. What is the output of ["a", "b"].pop()?

   o   A) "a"

   o   B) "b"

   o   C) ["a"]

   o   D) ["b"]

3. What does the shift() method do?

   o   A) Adds an element to the end

   o   B) Removes the first element

   o   C) Removes the last element

   o   D) Adds an element to the beginning

4. Which method adds an element to the beginning of an array?

   o   A) push()

   o   B) shift()

   o   C) pop()

   o   D) unshift()

5. What is the output of ["a"].concat(["b", "c"])?

   o   A) ["a", ["b", "c"]]

   o   B) ["a", "b", "c"]

   o   C) ["a", "c", "b"]

   o   D) ["b", "c", "a"]

6. The slice() method:

   o   A) Modifies the original array

   o   B) Returns a new array

   o   C) Deletes the selected elements

- D) None of the above

7. What is returned by slice(1, 3) on [1, 2, 3, 4, 5]?

   - A) [2, 3]

   - B) [1, 2, 3]

   - C) [2, 3, 4]

   - D) [3, 4]

8. What does splice() do?

   - A) Extracts a part of the array without modifying it

   - B) Adds/removes items from an array

   - C) Converts array to string

   - D) Sorts the array

9. What is the result of ["a", "b", "c"].indexOf("b")?

   - A) 0

   - B) 1

   - C) 2

   - D) -1

10. The includes() method returns:

    - A) The position of the item

    - B) true or false

    - C) The last element

    - D) None

11. What does toString() return for [1, 2, 3]?

    - A) 1+2+3

    - B) "1,2,3"

    - C) [1,2,3]

    - D) "123"

12. Which method is used to loop through every array item?

    - A) map()

    - B) forEach()

    - C) reduce()

    - D) indexOf()

13. What does map() return?

    o   A) A single value

    o   B) A string

    o   C) A new array

    o   D) The original array

14. Which method is used to filter array elements based on condition?

    o   A) map()

    o   B) filter()

    o   C) forEach()

    o   D) reduce()

15. What does reduce() return?

    o   A) A new array

    o   B) A single value

    o   C) A string

    o   D) A boolean

16. Which method checks if **any** array element matches a condition?

    o   A) every()

    o   B) some()

    o   C) map()

    o   D) includes()

17. Which method checks if **all** array elements match a condition?

    o   A) some()

    o   B) every()

    o   C) filter()

    o   D) find()

18. What is the result of ["a", "b", "c"].splice(1, 1)?

    o   A) ["b"]

    o   B) ["a", "b", "c"]

    o   C) ["a", "c"]

    o   D) ["b", "c"]

19. What happens to the original array after calling splice()?

- A) Nothing

- B) It's modified

- C) It's reversed

- D) It becomes a string

20. What is returned by ["x", "y", "z"].includes("y")?

- A) 1

- B) true

- C) false

- D) "y"

21. What is the output of "hello".length?

- A) 4

- B) 5

- C) 6

- D) length

22. What does toUpperCase() do?

- A) Converts all characters to lowercase

- B) Converts all characters to uppercase

- C) Capitalizes only the first letter

- D) Adds uppercase letters

23. "WORLD".toLowerCase() returns:

- A) "WORLD"

- B) "world"

- C) WORLD

- D) "World"

24. What does "abc".charAt(1) return?

- A) "a"

- B) "b"

- C) "c"

- D) undefined

25. What is returned by "hello world".indexOf("world")?

- A) 0

- B) 5

- C) 6

- D) -1

26. "typescript".includes("script") returns:

- A) true

- B) false

- C) "script"

- D) undefined

27. "JavaScript".startsWith("Java") returns:

- A) true

- B) false

- C) "Java"

- D) 0

28. "test.ts".endsWith(".ts") returns:

- A) false

- B) ".ts"

- C) true

- D) undefined

29. "foo bar".replace("bar", "baz") gives:

- A) "foo bar"

- B) "foo baz"

- C) "baz foo"

- D) "foobar"

30. "a,b,c".split(",") returns:

- A) "a b c"

- B) ["a", "b", "c"]

- C) "abc"

- D) ["a b c"]

31. " space ".trim() returns:

- A) "space"

- B) " space"

- o C) "space "
- o D) " space "

32. " start".trimStart() returns:
- o A) "start"
- o B) " start"
- o C) "start "
- o D) " start "

33. "end ".trimEnd() returns:
- o A) "end"
- o B) " end"
- o C) "end "
- o D) " end "

34. What is the type of return value of split()?
- o A) String
- o B) Number
- o C) Array
- o D) Boolean

35. toUpperCase() and toLowerCase():
- o A) Mutate the original string
- o B) Return new strings
- o C) Return a boolean
- o D) Only work on arrays

36. What does it mean when we say strings are immutable in TypeScript?
- o A) You can change characters directly
- o B) Strings can't be deleted
- o C) String values cannot be changed after creation
- o D) Strings can be changed in place

37. What happens when you run let s = "hi"; s[0] = "H";?
- o A) "Hi"
- o B) "hi"
- o C) "hi" with error

- D) "H"

38. How can you "change" a string in TypeScript?

   - A) Using replace()

   - B) Modifying the character directly

   - C) splice()

   - D) split()

39. Which of the following statements is true?

   - A) Strings are mutable like arrays

   - B) trim() modifies the original string

   - C) String methods return new strings

   - D) String values can be reassigned by index

40. What is a correct way to convert the string "typescript" to "TypeScript"?

   - A) "typescript".toUpperCase()

   - B) "typescript".replace("typescript", "TypeScript")

   - C) Modify "t" to "T"

   - D) "typescript"[0] = "T"

41. Which method is best to add an item to the end of an array?

   - A) push()

   - B) unshift()

   - C) pop()

   - D) shift()

42. How to remove the last item of an array?

   - A) shift()

   - B) pop()

   - C) splice()

   - D) slice()

43. How to return only uppercase strings from an array?

   let arr = ["one", "TWO", "three"];

   - A) arr.filter(x => x === x.toUpperCase())

   - B) arr.map(x => x.toUpperCase())

   - C) arr.forEach(x => x.toUpperCase())

- D) arr.includes(x => x.toUpperCase())

44. "hello".split("").reverse().join("") returns:

  - A) "hello"

  - B) "olleh"

  - C) ["h", "e", "l", "l", "o"]

  - D) Error

45. Which array method is used for accumulating a value?

  - A) reduce()

  - B) map()

  - C) filter()

  - D) every()

46. How to check if any string in an array contains the word "error"?

  - A) arr.map(x => x.includes("error"))

  - B) arr.some(x => x.includes("error"))

  - C) arr.every(x => x.includes("error"))

  - D) arr.find(x => x.includes("error"))

47. " spaced string ".trimStart().length returns:

  - A) Same as original

  - B) Less than original

  - C) More than original

  - D) Error

48. Which method converts an array to a comma-separated string?

  - A) join()

  - B) toString()

  - C) split()

  - D) Both A & B

49. "abc".toUpperCase().charAt(0) returns:

  - A) "A"

  - B) "a"

  - C) "ABC"

  - D) "b"

50. " x ".trim().toUpperCase() returns:

- A) " X "
- B) "X"
- C) " x "
- D) " x"

Answers:

1. B
2. B
3. B
4. D
5. B
6. B
7. A
8. B
9. B
10. B
11. B
12. B
13. C
14. B
15. B
16. B
17. B
18. A
19. B
20. B
21. B
22. B
23. B
24. B

25. B

26. A

27. A

28. C

29. B

30. B

31. A

32. A

33. A

34. C

35. B

36. C

37. B

38. A

39. C

40. B

41. A

42. B

43. A

44. B

45. A

46. B

47. B

48. D

49. A

50. B