✅ 20 Array Questions (Beginner → Intermediate) : By Gagan Baghel

Basic methods:

✅ `push()`

✅ `pop()`

✅ `shift()`

✅ `unshift()`

✅ `splice()`

🔵 QUESTIONS

1. Add a number to the end of an array using `push()`

Given:

```
let arr = [1, 2, 3];
```

Add the number `4` at the end.

📌 *Instruction: Only use* `push()`.

---

2. Remove the last element using `pop()`

Given:

```
let arr = [10, 20, 30, 40];
```

Remove the last element and store it in a variable.

📌 *Instruction: Only use* `pop()`.

---

3. Add an element at the beginning using `unshift()`

Given:

```
let arr = ["b", "c"];
```

Add `"a"` to the beginning.

📌 *Instruction: Only use* `unshift()`.

---

4. Remove the first element using `shift()`

Given:

```
let arr = [100, 200, 300];
```

Remove the first element.

📌 *Instruction: Only use* `shift()`.

---

5. Insert an element in the middle using `splice()`

Given:

```
let arr = [1, 2, 4, 5];
```

Insert `3` between `2` and `4`.

📌 *Instruction: Use* `splice(index, deleteCount, item)`.

---

6. Remove an element from the middle using `splice()`

Given:

```
let arr = ["red", "blue", "green"];
```

Remove `"blue"`.

📌 *Instruction: Use* `splice(index, 1)`.

---

7. Replace an element using `splice()`

Given:

```
let arr = [10, 20, 30];
```

Replace `20` with `25`.

📌 *Instruction: Use* `splice(index, deleteCount, newValue)`.

---

8. Insert 2 elements at the beginning without using `unshift()`

Given:

```
let arr = [3, 4, 5];
```

Add `1` and `2` at the start.

📌 *Instruction: Use only* `splice()`.

---

9. Insert 2 elements at the end without using `push()`

Given:

```
let arr = [1, 2, 3];
```

Add `4` and `5` at the end.

📌 *Instruction: Use* `splice(arr.length, 0, ...)`.

---

10. Remove the last 2 elements using `splice()`

Given:

```
let arr = [10, 20, 30, 40, 50];
```

Remove the last two elements.

📌 *Instruction: Use* `splice(arr.length - 2, 2)`.

---

11. Add elements one-by-one using a `for` loop + push

You have an empty array:

```
let arr = [];
```

Add numbers `1 to 5` using a loop.

📌 *Instruction: Use a simple for loop + push.*

---

12. Remove first 3 elements using `shift()` repeatedly

Given:

```
let arr = [5, 6, 7, 8, 9];
```

Remove first 3 elements.

📌 *Instruction: Use a* `for` *loop that calls* `shift()` *3 times.*

---

13. Reverse an array manually (without reverse method)

Given:

```
let arr = [1, 2, 3, 4];
```

Create a **new array** that stores reversed values.

📌 *Instruction: Use* `pop()` *inside a loop and* `push()` *to build new array.*

---

14. Move the first element to the end

Given:

```
let arr = [10, 20, 30, 40];
```

Move `10` to the end.

📌 *Instruction: Use `shift()` then `push()`.*

---

15. Move the last element to the start

Given:

```
let arr = [100, 200, 300];
```

Move `300` to beginning.

📌 *Instruction: Use `pop()` then `unshift()`.*

---

16. Insert an element at a dynamic middle index

Given:

```
let arr = [1, 2, 3, 4];
```

Insert `99` exactly in the middle.

📌 *Instruction: Use `splice(arr.length / 2, 0, 99)`.*

---

17. Remove all elements one-by-one (empty array)

Given:

```
let arr = [7, 8, 9, 10];
```

Remove everything.

📌 *Instruction: Use a `while(arr.length > 0)` + `pop()`.*

---

18. Copy first 3 elements to a new array

Given:

```
let arr = [2, 4, 6, 8, 10];
```

Create a new array containing only `2, 4, 6`.

📌 *Instruction: Use `for` loop + `push()`.*

---

19. Insert a value in the second last position

Given:

```
let arr = [1, 2, 3, 5];
```

Insert `4` at second last index.

📌 *Instruction: Use `splice(arr.length - 1, 0, 4)`.*

---

20. Remove and replace multiple values

Given:

```
let arr = ["a", "b", "x", "y", "e"];
```

Replace `x` and `y` with `"c"` and `"d"`.

📌 *Instruction: Use `splice(2, 2, "c", "d")`.*

✅ 20 MCQs on Basic Array Methods (Beginner → Intermediate)

Each question has **4 options**.

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1. What does `push()` do?

A. Adds element at the beginning

B. Removes last element

C. Adds element at the end

D. Removes element from the middle

---

2. Which method removes the first element from an array?

A. shift()

B. pop()

C. unshift()

D. cut()

---

3. What is the result of:

```
let arr = [1, 2, 3];
arr.pop();
```

A. `[1, 2, 3, undefined]`

B. `[1, 2]`

C. `[2, 3]`

D. `[1]`

---

4. What will `unshift()` do?

A. Add element at the end

B. Remove element from middle

C. Add element at the beginning

D. Remove last element

---

5. What is the output?

```
let arr = [10, 20];
arr.push(30);
```

A. `[10, 20]`

B. `[10, 20, 30]`

C. `[30, 10, 20]`

D. Error

---

6. What does `pop()` return?

A. Always returns the whole array

B. Always returns first element

C. Returns the removed last element

D. Returns undefined always

---

7. What does this do?

```
let arr = [1, 2, 3];
arr.shift();
```

A. Removes last element

B. Removes first element

C. Inserts 0 at beginning

D. Does nothing

---

8. `splice(2, 1)` means:

A. Remove 2 elements starting from index 1

B. Remove 1 element starting from index 2

C. Insert 2 elements at index 1

D. Insert 1 element at index 2

---

9. What is the output?

```
let arr = ["a", "b", "c"];
arr.unshift("z");
```

A. `["a", "b", "c", "z"]`

B. `["z", "a", "b", "c"]`

C. `["a", "z", "b", "c"]`

D. Error

---

10. What does this do?

```
let arr = [1, 2, 3, 4];
arr.splice(1, 2);
```

A. Removes 1 item at index 2

B. Removes 2 items starting from index 1

C. Adds 1 at index 2

D. Adds 2 at index 1

---

11. What does `splice(1, 0, 99)` do?

A. Deletes element at index 1

B. Inserts 99 at index 1

C. Replaces element at index 1

D. Removes all elements

---

12. What is the output?

```
let arr = [10, 20, 30];
arr.pop();
arr.pop();
```

A. `[10, 20, 30, 30]`

B. `[30]`

C. `[10]`

D. `[]`

---

13. Which method can *both* insert and delete elements?

A. push()

B. shift()

C. unshift()

D. splice()

---

14. What does this return?

```
let arr = [1, 2];
let x = arr.shift();
```

A. `x = 1`

B. `x = 2`

C. `x = undefined`

D. `x = [1]`

---

15. What happens here?

```
let arr = [5, 6, 7];
arr.unshift(4);
```

```
arr.push(8);
```

A. `[4, 5, 6, 7, 8]`

B. `[8, 5, 6, 7, 4]`

C. `[4, 8, 5, 6, 7]`

D. `[5, 6, 7, 4, 8]`

---

16. What is the effect of `splice(0, 1)` ?

A. Removes last element

B. Removes middle element

C. Removes first element

D. Inserts at index 0

---

17. What is the output?

```
let arr = ["x", "y", "z"];
arr.pop();
arr.unshift("a");
```

A. `["x", "y"]`

B. `["x", "y", "z", "a"]`

C. `["a", "x", "y"]`

D. `["a", "x", "y", "z"]`

---

18. `push()` returns __ ?

A. New array

B. Length of new array

C. Removed element

D. undefined

---

19. What does `splice(1, 1, "new")` do?

A. Inserts without deleting

B. Deletes without inserting

C. Replaces one element

D. Deletes whole array

---

20. What is the output?

```
let arr = [1, 2, 3];
arr.splice(1, 0, 9);
```

A. `[1, 9, 2, 3]`

B. `[9, 1, 2, 3]`

C. `[1, 2, 9, 3]`

D. `[1, 2, 3, 9]`

✅ ANSWER KEY (MCQs on Array Methods)

1. C – Adds element at the end

2. A – `shift()` removes first element

3. B – `[1, 2]`

4. C – Adds element at the beginning

5. B – `[10, 20, 30]`

6. C – `pop()` returns removed last element

7. B – Removes first element

8. B – Removes 1 element at index 2

9. B – `["z", "a", "b", "c"]`

10. B – Removes 2 items starting at index 1

11. B – Inserts 99 at index 1

12. C – `[10]`

13. D – Only `splice()` inserts + deletes

14. A – shift() removes and returns 1

15. A – `[4, 5, 6, 7, 8]`

16. C – Removes first element

17. C – `["a", "x", "y"]`

18. B – `push()` returns new length

19. C – Replaces one element

20. A – `[1, 9, 2, 3]`
