50+ Rotation Array Operation MCQs with FREE PDF

1. What will be the auxiliary space complexity of the code to rotate an array by using the reversal algorithm (d = number of rotations)?

a) O(1)

b) O(n)

c) O(d)

d) O(n*d)

Answer: O(1)

2. Which of the following is the predefined function for array reversal in C++?
a) rotate()

b) arr_rotate()

c) array_rotate()

d) rot()

Answer: rotate()

3. How many arguments are required by the predefined function rotate() in C++?
a) 1

b) 2

c) 3

d) 4

Answer: 3

4. Predefined function rotate() in C++ is available under which header file?
a) math

b) stdio

c) stdlib

d) algorithm

Answer: algorithm

5. Which of the following algorithm to rotate an array has the maximum time complexity?
a) rotate elements one by one

b) juggling algorithm

c) reversal algorithm

d) using a temporary array

Answer: rotate elements one by one

6. What is the time complexity of the juggling algorithm to rotate an array?

a) O(1)

b) O(n)

c) O(d)

d) O(n*d)

Answer: O(n)

7. What will be the resulting array after rotating arr[]={1, 2, 3, 4, 5} by 2?

a) 2, 1, 3, 4, 5

b) 3, 4, 5, 1, 2

c) 4, 5, 1, 2, 3

d) 1, 2, 3, 5, 4

Answer: 3, 4, 5, 1, 2

8. What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;
int main()
{
    int arr[] = {1,2,3,4,5,6};
    int n = sizeof(arr)/sizeof(arr[0]);
    int d=4;
    int temp[10];

    for(int i=0;i<d;i++)
    temp[i]=arr[i];

    int j=0;
    for(int i=d;i<n;i++,j++)
    arr[j]=arr[i];

    int k=0;
    for(int i=n-d;i<n;i++,k++)
    arr[i]=temp[k];

    for(int i=0;i<n;i++)
    cout<<arr[i]<<" ";
    return 0;
}
```

a) 5 6 1 2 3 4

b) 6 5 4 3 1 2

c) 3 4 5 6 1 2

d) error

Answer: 5 6 1 2 3 4

9. What will be the time complexity of the following code?

```cpp
#include <iostream>
using namespace std;
int main()
{
    int arr[] = {1,2,3,4,5,6};
    int n = sizeof(arr)/sizeof(arr[0]);
    int d=4;
    int temp[10];

    for(int i=0;i<d;i++)
    temp[i]=arr[i];

    int j=0;
    for(int i=d;i<n;i++,j++)
    arr[j]=arr[i];

    int k=0;
    for(int i=n-d;i<n;i++,k++)
    arr[i]=temp[k];

    for(int i=0;i<n;i++)
    cout<<arr[i]<<" ";
    return 0;
}
```

a) O(d)

b) O(n)

c) O(n2)

d) O(n*d)

Answer: O(n)

10. What will be the auxiliary space complexity of the following code?

```cpp
#include <iostream>
using namespace std;
int main()
{
    int arr[] = {1,2,3,4,5,6};
    int n = sizeof(arr)/sizeof(arr[0]);
    int d=4;
    int temp[10];

    for(int i=0;i<d;i++)
    temp[i]=arr[i];

    int j=0;
    for(int i=d;i<n;i++,j++)
    arr[j]=arr[i];

    int k=0;
    for(int i=n-d;i<n;i++,k++)
    arr[i]=temp[k];

    for(int i=0;i<n;i++)
    cout<<arr[i]<<" ";
    return 0;
}
```

a) O(1)

b) O(n)

c) O(d)

d) O(n*d)

Answer: O(d)