

DSA_Quiz-1_19/2/2021

Quiz contains Introduction, Array, stack, sorting(Bubble, Selection, Insertion) ,searching

* This form will record your name, please fill your name.

1

What is the output of below program?
(1 Point)

```
int main()
{
    int i;
    int arr[5] = {1};
    for (i = 0; i < 5; i++)
        printf("%d ", arr[i]);
    return 0;
}
```

- ☐ 1 followed by four garbage values
- ☐ 1 0 0 0 0
- ☐ 1 1 1 1 1
- ☐ 0 0 0 0 0

2

Consider the following declaration of a 'two-dimensional array in C:

```
char a[100][100];
```

Assuming that the main memory is byte-addressable and elements are stored as row major order. The array is stored starting from memory address 0, the address of a[40][50] is

(2 Points)

☐ 4040

☐ 4050

☐ 5040

☐ 5050

3

Consider the following declaration of a 'two-dimensional array in C:

```
char a[100][100];
```

Assuming that the main memory is byte-addressable and elements are stored as column major order. The array is stored starting from memory address 0, the address of a[40][50] is

(2 Points)

☐ 4040

☐ 4050

☐ 5040

☐ 5050

4

What are the advantages of arrays?
(1 Point)

- ☐ Easier to store elements of same data type
- ☐ Used to implement other data structures like stack and queue
- ☐ Convenient way to represent matrices as a 2D array
- ☐ All of the mentioned

5

What is the maximum number of dimensions an array in C may have?
(1 Point)

- ☐ 2
- ☐ 8
- ☐ 20
- ☐ 50
- ☐ Theoretically no limit. The only practical limits are memory size and compilers

6

What is the postfix form of the given INFIX expression : $a*b/d+t*c-y$
(2 Points)

- ☐ $ab*d/tc^*+y-$
- ☐ abd^*/tc^*+y-
- ☐ abd/t^*c^*+y-
- ☐ $ab*d/tc^*+-y$

7

What are stack contents (from topmost symbol) after checking all characters in INFIX expression given in above question? (Write your answer comma separated. eg., a,b)
(2 Points)

8

What is the arrangement of the list : 20,19,56,78,34,11,10,4,7 after 3 passes of bubble sort?
(2 Points)

- ☐ 19,20,11,10,4,7,34,56,78
- ☐ 19,11,10,4,7,20,34,56,78
- ☐ 19,20,11,10,7,4,34,56,78

9

How many exchanges (swapping) are performed to sort the list of above question to arrange the list in ascending order using bubble sort?
(2 Points)

10

Which of the following statement is true for selection sort?
(1 Point)

- ☐ After each pass, maximum element would be placed at the end of the list.
- ☐ After one pass, minimum element would be placed at the first position of the list.

11

How many recursive calls are made to search 56 from the given list :
23,24,30,42,56,70,76 using binary search?
(1 Point)

- ☐ 3
- ☐ 2
- ☐ 4

12

What is the value after evaluating given postfix expression : $3\ 6\ +\ 7\ -\ 3\ 4\ *\ *\ 3\ /\$
(1 Point)

13

The following postfix expression with single digit operands is evaluated using a stack
 $8\ 2\ 3\ ^\ /\ 2\ 3\ *\ 5\ 1\ *\ -$

The top two elements of the stack after the first $*$ is evaluated are ?
(2 Points)

- ☐ 6,1
- ☐ 5,7
- ☐ 3,2
- ☐ 1,5

This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.

 Microsoft Forms