Intern Hiring Test (Beta)

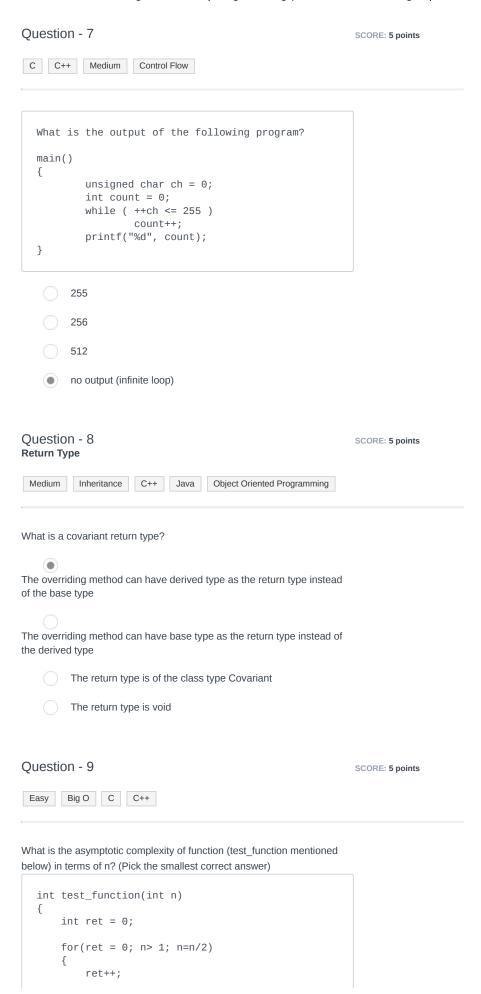


120 minutes Question - 1 SCORE: 5 points Medium Algorithms Sorting Number of swapping operations needed to sort numbers 8,22,7,9,31,19,5,13 is ascending order using bubble sort 11 12 13 14 Ouestion - 2 SCORE: 5 points QuickSort: Best Performance Algorithms Medium Sorting Let P be the quicksort program where the larger of the first two distinct elements is chosen as the pivot element. Which of the following input permutations will lead to the best performance of P? [1 2 3 4] [4 3 2 1] [1 3 2 4] [1 3 4 2] Question - 3 SCORE: 5 points Algorithms Medium Is the stability of a sorting algorithm more likely to be a concern while dealing with 1. an array or list of primitive data types 2. an array or list holding objects of composite data types (i.e, classes or structures with multiple fields are present) Choose the best answer below the stability will matter equally in both cases. the stability is likely to be a concern while dealing with an array or list of primitive data types

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the stability is likely to be a concern while dealing with an array or list molding objects of composite data types (i.e, classes or structures with multiple fields are present)	
None of the above.	
Question - 4	SCORE: 5 points
Algorithms Medium Sorting	
Which of the following sorting methods is stable ?	
straight insertion sort	
binary insertion sort	
shell sort	
heap	
Question - 5	SCORE: 5 points
C C++ Bitwise Operators Medium	
What is the output of the following program?	
<pre>int main()</pre>	
{ int i = 5, j = 2; printf("%d %d", i << j, i >> j);	
}	
<u> </u>	L
20 1	
1 20	
64 0	
Question - 6	SCORE: 5 points
C++ Bitwise Operators Hard	
f n & (n - 1) == 0, what can you say about integer n?	
n is an even number.	
n is a power of 2.	
n is an odd number.	
n is not a power of 2.	



str1 = str2;printf("%s %s", str1, str); } Compiler error

Hello World

World Hello

World World

Question - 14

SCORE: 5 points

Medium C++ Control Flow

```
What is the output of the following program?
#include<iostream>
using namespace std;
int main()
    int i = 16;
    for (; i; i >>= 1)
        if (i = 5)
        {
                cout << "world ";
                break;
        cout << i << " ";
}
```

- 16 8 world
- 16 8 world 4 2 1
- 16 8 world 5 4 2 1
- world

Question - 15

SCORE: 5 points



```
What is the output of the following program?
int main()
        int a = 5;
        try
                 throw a;
        catch(float b)
                 cout << "float" << b << endl;</pre>
        }
        return 0;
}
```

- Compile time error
- Compiles successfully, fails at runtime

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	float5
	float5.0