

<b>Started on</b>	Wednesday, 9 March 2022, 9:43 PM
<b>State</b>	Finished
<b>Completed on</b>	Wednesday, 9 March 2022, 9:50 PM
<b>Time taken</b>	6 mins 41 secs
<b>Marks</b>	4.00/5.00
<b>Grade</b>	<b>80.00</b> out of 100.00

### Question

1

Not answered

Marked out of  
1.00

The keys 198, 171, 123, 258, 375, 419, 68 are to be inserted into a hash table of size 9 using open Addressing with hash function  $h(k) = k \bmod 9$  and quadratic probing. What will be the locations of keys 68 and 375 in the hash table?

Select one:

- ☐ a. 2 and 4
- ☐ b. 5 and 1
- ☐ c. 3 and 4
- ☐ d. 3 and 7

### Question

2

Complete

Mark 1.00 out of  
1.00

The minimum number of interchanges needed to convert the array 89, 19, 40, 17, 12, 10, 2, 5, 7, 11, 6, 9, 70 into a heap with the maximum element at the root is

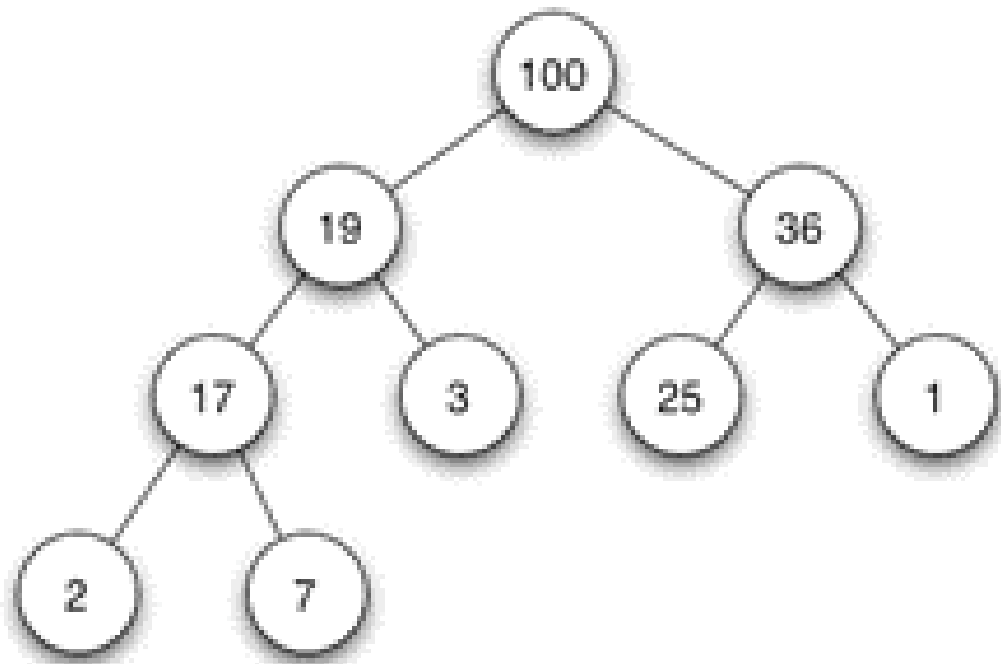
Select one:

- ☐ a. 3
- ☒ b. 2
- ☐ c. 0
- ☐ d. 1

### Question 3

Complete

Mark 1.00 out of 1.00



If we implement heap as maximum heap , adding a new node of value 35,. What values will be at leaf nodes of the left sub tree of the heap.

Select one:

- ☐ a. 2 and 7
- ☒ b. 3 and 2 and 7
- ☐ c. 35 and 7
- ☐ d. 35,2 and 7

## Question

# 4

Complete

Mark 1.00 out of 1.00

Let  $Q$  denote a queue containing sixteen numbers and  $S$  be an empty stack.  $\text{Head}(Q)$  returns the element at the head of the queue  $Q$  without removing it from  $Q$ . Similarly  $\text{Top}(S)$  returns the element at the top of  $S$  without removing it from  $S$ . Consider the algorithm given below.

```
while  $Q$  is not Empty do
  if  $S$  is Empty OR  $\text{Top}(S) \leq \text{Head}(Q)$  then
     $x := \text{Dequeue}(Q);$ 
     $\text{Push}(S, x);$ 
  else
     $x := \text{Pop}(S);$ 
     $\text{Enqueue}(Q, x);$ 
  end
end
```

The maximum possible number of iterations of the while loop in the algorithm is \_\_\_\_\_

Select one:

- ☐ a. 64
- ☐ b. 32
- ☐ c. 16
- ☒ d. 256

## Question

# 5

Complete

Mark 1.00 out of 1.00

A hash table size is 10 and you're inserted the following letters of string K R P C S N Y T J M into the that hash table by using  $h(x) = ((\text{ord}(x) - \text{ord}(A) + 1)) \bmod 10$ . you know linear probing will solve collision, then which letter insertion triggers the collision?

Select one:

- ☐ a. Y
- ☐ b. P
- ☒ c. M
- ☐ d. C