

SECTIONS

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CSCI 2270 - Gupta, Trivedi, Zagrodzki - CS2: Data Structures

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Started on	Friday, 12 April 2019, 5:41 PM
State	Finished
Completed on	Friday, 12 April 2019, 7:21 PM
Time taken	1 hour 39 mins
Grade	55.00 out of 100.00

Question 1

Not answered

Marked out of 5.00

Suppose we have some numbers between 1 and 1000 in a binary search tree and want to search for the number 363. Which of the following sequence could NOT be the sequence of the node examined?

Select one:

☐ a. 925, 202, 911, 240, 912, 245, 258, 363

☐ b. 924, 220, 911, 244, 898, 258, 362, 363

☐ c. 2, 399, 387, 219, 266, 382, 381, 278, 363

☐ d. None of these

Your answer is incorrect.

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https://moodle.cs.colorado.edu/mod/quiz/review.php?attempt=432755&cmid=36259#q4

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Mark 5.00 out of 5.00

```
#include <iostream>
```

```
struct Node {
    int key;
    Node* left;
    Node* right;
};
```

```
Node(int k) {
this->key = k;
this->right = this->left = NULL;
}
};
```

```
void traverse(Node* n, int *k) {
    if (n == NULL) {
        (*k)++;
        return;
    }
}
```

```

    traverse(n->left, k);
    traverse(n->right, k);
}

```

```
int main() {
Node* root = new Node(12);
root->left = new Node(6);
root->right = new Node(15);
root->left->left = new Node(2);
root->right->right = new Node(8);
```

```
int m = 0;
traverse(root, &m);
```

```
cout << m << endl;
}
```

Select one:

• a. 6



☐ b. 4

○ c. 2

☐ d. 0

Your answer is correct.

Question 3

Correct

Mark 5.00 out of 5.00

Consider a binary min-heap implemented using an array. Which one of the following arrays could be a valid min-heap?

Select one:

a. 25 27 35 46 52 43 41



☐ b. 27 25 35 46 52 43 41

☐ c. 25 27 43 46 52 35 41

☐ d. 25 46 35 27 52 43 41

Your answer is correct.



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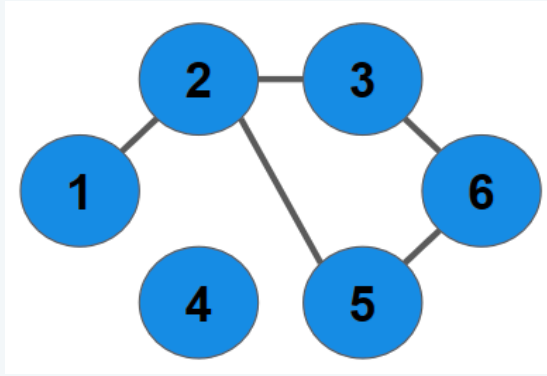
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15

Incorrect

Mark 0.00 out of 5.00

the nodes in the graph below, with the starting vertex being z:



Select one:

- ☐ a. 2 1 3 5 6
- ☐ b. 2 5 6 3 1
- ☐ c. 2 6 5 3 1
- ☒ d. 2 3 6 5 1

Your answer is incorrect.

Question 5

Incorrect

Mark 0.00 out of 5.00

A chained hash table has an array size of 512. What is the maximum number of elements that can be inserted?

Select one:

- ☒ a. 512
- ☐ b. 511
- ☐ c. 1024
- ☐ d. 256
- ☐ e. Unlimited

Your answer is incorrect.

Question 6

Correct

Mark 5.00 out of 5.00

Which of the following is true about the difference between graph and tree traversal?

Select one:

- ☒ a. All of these
- ☐ b. Pre-order is a special kind of depth first traversal for trees
- ☐ c. A tree is a special kind of graph so we can do a BFS of a tree
- ☐ d. DFS uses a stack and BFS uses a queue
- ☐ e. Graphs can have cycles so we must maintain a visited flag for each of the vertices when we traverse

Your answer is correct.

