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Finish review

Completed on	Monday, 13 September 2021, 3:10 PM
Time taken	9 mins 25 secs
Grade	**8.00** out of 10.00 (**80**%)

Question **1**

Correct

Mark 2.00 out of 2.00

Flag question

Which of these best describes an array?

Select one:

a.
A data structure that shows a hierarchical behavior

b.
Array is not a data structure

c.
Arrays are immutable once initialised

d.
Container of objects of similar types ✔

Your answer is correct.

The correct answer is:
Container of objects of similar types

Question **2**

Correct

How do you instantiate an array in Java?

Container of objects of similar types

Question **2**

Correct

Mark 2.00 out of 2.00

Flag question

How do you instantiate an array in Java?

Select one:

a.
int arr[] = new int(3);

b.
int arr[] = new int[3];
✔

c.
int arr() = new int(3);

d.
int arr[];

Your answer is correct.

The correct answer is:
int arr[] = new int[3];

Question **3**

Correct

What are the advantages of arrays?

int arr[] = new int[3];

Question **3**
Correct
Mark 2.00 out of 2.00
Flag question

What are the advantages of arrays?

Select one:

a.
Index of first element of an array is 1

b.
Easier to store elements of same data type
✔

c.
Elements in an array cannot be sorted

d.
Objects of mixed data types can be stored

Your answer is correct.

The correct answer is:
Easier to store elements of same data type

Question **4**
Correct

What is the output of the following code?

Question **4**

Correct

Mark 2.00 out of 2.00

Flag question

What is the output of the following code?

```
public class Test{
    public static void main(String args[]){
        double[] myList = {1, 5, 5, 5, 5, 1};
        double max = myList[0];
        int indexOfMax = 0;
        for(int i = 1; i < myList.length; i++){
            if(myList[i] > max){
                max = myList[i];
                indexOfMax = i;
            }
        }
        System.out.println(indexOfMax);
    }
}
```

Select one:

- a. 2
- b. 3
- c. 1 ✔
- d. 0

Your answer is correct.

The correct answer is: 1

Question **5**

Incorrect

Mark 0.00 out of 2.00

Flag question

What is the value of a[1] after the following code is executed?

```
int[] a = {0, 2, 4, 1, 3};
for(int i = 0; i < a.length; i++){
a[i] = a[(a[i] + 3) % a.length];
}
```

Select one:

- a. 1
- b. 0 ✖
- c. 9
- d. 4

Your answer is incorrect.

The correct answer is: 1

1 2 3 4 5

Show one page at a time

Finish review

State	Finished
Completed on	Monday, 20 September 2021, 3:17 PM
Time taken	15 mins
Grade	**8.00** out of 10.00 (**80**%)

Question **1**

Correct

Mark 2.00 out of 2.00

Flag question

What are the time complexities of finding the first element from the beginning and end of the singly linked list respectively? Let n be the number of nodes in the linked list.

Select one:

- a. O(1) and O(1)
- b. O(n) and O(1)
- c. O(n) and O(n)
- d. O(1) and O(n) ✔

Your answer is correct.

The correct answer is: O(1) and O(n)

Question **2**

Correct

Mark 2.00 out of 2.00

Flag question

What is the output of following function for start pointer pointing to first node of following linked list? 1->2->3->4->5->6->null

```
void fun(struct node* start)
{
 if(start == NULL){
   Return;
 }
```

Question **2**

Correct

Mark 2.00 out of 2.00

Flag question

What is the output of following function for start pointer pointing to first node of following linked list? 1->2->3->4->5->6->null

```
void fun(struct node* start)
{
 if(start == NULL){
  Return;
 }
 print(start->data);
 if(start->next != NULL ){
  fun(start->next->next);
 }
 print(start->data);
}
```

Select one:

- a. **1 3 5 1 3 5**
- b. 1 3 5 5 3 1 ✔
- c. 1 2 3 5
- d. **1 4 6 6 4 1**

Your answer is correct.

The correct answer is: 1 3 5 5 3 1

Question **3**

Incorrect

Mark 0.00 out of 2.00

Flag question

Consider an implementation of unsorted single linked list. Suppose it has its representation with a head and a tail pointer (i.e. pointers to the first and last nodes of the linked list). Given the representation, which of the following operation can not be implemented in O(1) time ?

Select one:

- a. **Insert at Begining of Linked List**
- b. **Insert at end of Linked List**
- c. **Delete last node of Linked List**
- d. **Delete first node of Linked List** ✖

Your answer is incorrect.

The correct answer is: **Delete last node of Linked List**

Question **4**

Correct

Mark 2.00 out of 2.00

Flag question

An n*n array V is defined as follows

V[i,j] = i-j for all i,j, 1<=i<=n;1<=j<=n;

The sum of the elements of the array V is

Your answer is incorrect.

The correct answer is: **Delete last node of Linked List**

Question **4**

Correct

Mark 2.00 out of 2.00

Flag question

An n*n array V is defined as follows

V[i,j] = i-j for all i,j, 1<=i<=n;1<=j<=n;

The sum of the elements of the array V is

Select one:

- a. n^2-3n+2
- b. n - 1
- c. 0 ✔
- d. $n^2 * (n+1) / 2$

Your answer is correct.

The correct answer is: 0

Question **5**

Correct

Mark 2.00 out of 2.00

Flag question

Suppose you are given an array s[1...n] and a procedure reverse (s,i,j) which reverse the order of elements in s between positions i and j (both inclusive). What does the following sequence do, where 1 < k <= n:

reverse (s, 1, k);

reverse (s, k + 1, n);

The correct answer is: 0

Question **5**

Correct

Mark 2.00 out of 2.00

Flag question

Suppose you are given an array s[1...n] and a procedure reverse (s,i,j) which reverse the order of elements in s between positions i and j (both inclusive). What does the following sequence do, where 1 < k <= n:

reverse (s, 1, k);

reverse (s, k + 1, n);

reverse (s, 1, n);

Select one:

- a. Rotate array by k positions to left (Anti-clockwise) ✔
- b. None of the Above
- c. Reverse entire array
- d. Leave array unchanged

Your answer is correct.

The correct answer is: Rotate array by k positions to left (Anti-clockwise)

Finish review

Finish review

Grade **10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 2.00 out of 2.00

Flag question

You are given a empty stack of size 100. What are the elements present in the stack after you perform following operations.

1 add a,b,c,d,e,f

2 pop two elements

3 add g

4 Add h

5 pop 5 elements

6 add i

Select one:

a.
a, b , c, i

b.
a, i ✔

c. None

d. a, b

Your answer is correct.

The correct answer is:
a, i

a, i

Question **2**
Correct
Mark 2.00 out of 2.00
Flag question

Convert the following infix expression into its equivalent post fix expression (A + B^ D) / (E – F) + G

Select one:

a.
ABD + ^EF – / G+

b.
ABD + ^EF / – G+

C:

C:

c.
ABD^ + EF / – G+

d.
ABD^ + EF – / G+

Your answer is correct.

Correct

Mark 2.00 out of 2.00

Flag question

Consider the following pseudocode that uses a stack

```
declare a stack of characters
while ( there are more characters in the word to read )
{
  read a character
  push the character on the stack
}
while ( the stack is not empty )
{
  pop a character off the stack
  write the character to the screen
}
```

What is output for input "geeksquiz"?

Select one:

a.
1.

ziuqskeeg

ziuqskeeg

ziuqskeeg

✔

b.
geeksquiz

c.
Ziuqskeegziuqskeeg

d.
1. 1.

geeksquizgeeksquiz

Question 4
Correct
Mark 2.00 out of 2.00
Flag question

```
void fun(int n)
{
  Stack S<int>;  // Say it creates an empty stack S
  while (n > 0)
  {
   // This line pushes the value of n%2 to stack S
   push(S, n%2);

   n = n/2;
  }

  // Run while Stack S is not empty
  while (!isEmpty(&S))
   printf("%d ", pop(&S)); // pop an element from S and print it
}
```

What does the above function do in general?

Select one:

a.
Prints the value of Logn

b.
Prints binary representation of n in reverse order

c.
Prints binary representation of n
✔

d.
Prints the value of Logn in reverse order

Question **5**
Correct
Mark 2.00 out of 2.00
Flag question

Following is an incorrect pseudocode for the algorithm which is supposed to determine whether a sequence of parentheses is balanced:

```
declare a character stack
while ( more input is available)
{
  read a character
  if ( the character is a '(' )
    push it on the stack
  else if ( the character is a ')' and the stack is not empty )
    pop a character off the stack
  else
    print "unbalanced" and exit
}
print "balanced"
```

Which of these unbalanced sequences does the above code think is balanced?

Select one:

a.
(( ) ( )))

b.
( )) (( )

c.
1.
((( )) ✔

d.
(( )) ( )

Your answer is correct

1 2 3 4 5

Show one page at a time

Finish review

State	Finished
Completed on	Monday, 22 November 2021, 3:18 PM
Time taken	18 mins 5 secs
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 2.00 out of 2.00

Flag question

Which one of the following array elements represents a binary min heap?

Select one:

a. **14 17 25 10 12 8**

b. **8 10 12 25 14 17** ✔

c. **12 10 8 25 14 17**

d. **25 17 14 12 10 8**

Your answer is correct.

The correct answer is: **8 10 12 25 14 17**

Question **2**

Correct

Mark 2.00 out of 2.00

1. In a binary min heap containing n numbers, the 5th smallest element can be found in time _____. Consider no duplicate elements are present in the heap

Select one:

d. **25 17 14 12 10 8**

Your answer is correct.

The correct answer is: **8 10 12 25 14 17**

Question **2**

Correct

Mark 2.00 out of 2.00

Flag question

1. In a binary min heap containing n numbers, the 5th smallest element can be found in time _____. Consider no duplicate elements are present in the heap

Select one:

a.
1. O(logn)

b.
1. O(n)

c. O(1) ✔

d. O(nlogn)

Your answer is correct.

The correct answer is: O(1)

Question **3**

Correct

Consider the following binary search tree T given below:

Question **3**

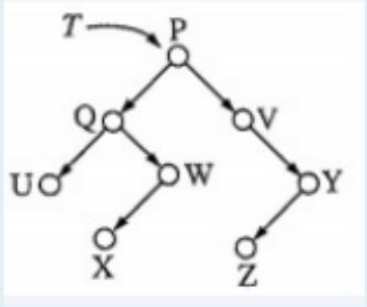
Correct

Mark 2.00 out of 2.00

Flag question

Consider the following binary search tree T given below:

Which node contains the fourth-smallest element in T?



Select one:

- a. W ✔
- b. V
- c. X
- d. Q

Your answer is correct.

The correct answer is: W

Question **4**

Correct

Mark 2.00 out of 2.00

Flag question

Suppose that we have numbers between 1 and 1,000 in a binary search tree and want to search for the number 364. Which of the following sequences could not be the sequence of nodes examined?

Select one:

a.
925, 221, 912, 245, 899, 259, 363, 364

b.
926, 203, 912, 241, 913, 246, 364 ✔

c.
3, 253, 402, 399, 331, 345, 398, 364

d.
3, 400, 388, 220, 267, 383, 382, 279, 364

Your answer is correct.

The correct answer is:
926, 203, 912, 241, 913, 246, 364

Question **5**

A binary tree T has n leaf nodes. The number of nodes of degree 2 in T is

The correct answer is:
926, 203, 912, 241, 913, 246, 364

Question **5**
Correct
Mark 2.00 out of 2.00
Flag question

A binary tree T has n leaf nodes. The number of nodes of degree 2 in T is

Select one:

- a. **2n**
- b. **n-1** ✔
- c. **n**
- d. **log2n**

Your answer is correct.

The correct answer is: **n-1**

Finish review