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**NPTEL** (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Problem solving through Programming In C (course)**

 Announcements (announcements)    **About the Course** ([https://swayam.gov.in/nd1\\_noc20\\_cs06/preview](https://swayam.gov.in/nd1_noc20_cs06/preview))

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## Unit 11 - Week 9

### Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

- Lecture 41: Substitution of # include and Macro (unit? unit=10&lesson=55)

## Assignment 9

The due date for submitting this assignment has passed. **Due on 2020-04-01, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) What is the worst case complexity of selection sort?

1 point

- ☐ a)  $O(n \log n)$
- ☐ b)  $O(\log n)$
- ☐ c)  $O(n)$
- ☐ d)  $O(n^2)$

No, the answer is incorrect.  
Score: 0

Accepted Answers:

d)  $O(n^2)$ 

2) What is the best case and worst case complexity of ordered linear search? 1 point

- ☐ a)  $O(n \log n)$ ,  $O(\log n)$
- ☐ b)  $O(\log n)$ ,  $O(n \log n)$
- ☐ c)  $O(n)$ ,  $O(1)$
- ☐ d)  $O(1)$ ,  $O(n)$

No, the answer is incorrect.  
Score: 0

Accepted Answers:

☐ Lecture 42:  
"search" as a  
function (unit?  
unit=10&lesson=56)

☐ Lecture 43:  
Binary Search  
(unit?  
unit=10&lesson=57)

☐ Lecture 44:  
Binary Search  
(Contd.) (unit?  
unit=10&lesson=58)

☐ Lecture 45:  
Sorting Methods  
(unit?  
unit=10&lesson=59)

☐ **Quiz :**  
**Assignment 9**  
(assessment?  
name=150)

☐ Week-09  
Program-01  
(/noc20\_cs06/progassignment?  
name=151)

☐ Week-09  
Program-02  
(/noc20\_cs06/progassignment?  
name=152)

☐ Week-09  
Program-03  
(/noc20\_cs06/progassignment?  
name=153)

☐ Week-09  
Program-04  
(/noc20\_cs06/progassignment?  
name=154)

☐ Week-09  
Program-05  
(/noc20\_cs06/progassignment?  
name=155)

☐ Feedback For  
Week 9 (unit?  
unit=10&lesson=168)

**Week 10**

**Week 11**

**Week 12**

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d)  $O(1)$ ,  $O(n)$

3) Given an array  $arr = \{12, 34, 47, 62, 85, 92, 95, 99, 105\}$  and key = 34; what are the mid values (corresponding array elements) generated in the first and second iterations? **1 point**

- ☐ a) 85 and 12
- ☐ b) 85 and 34
- ☐ c) 62 and 34
- ☐ d) 62 and 47

No, the answer is incorrect.

Score: 0

Accepted Answers:

*b) 85 and 34*

4) When the Binary search is best applied to an array? **1 point**

- ☐ a) For very large size array
- ☐ b) When the array is sorted
- ☐ c) When the array elements are mixed data type
- ☐ d) When the array is unsorted

No, the answer is incorrect.

Score: 0

Accepted Answers:

*b) When the array is sorted*

5) Consider the array  $A[] = \{5, 4, 9, 1, 3\}$  apply the insertion sort to sort the array. Consider the cost associated with each sort is 25 rupees, what is the total cost of the insertion sort for sorting the entire array? **1 point**

- ☐ a) 25
- ☐ b) 50
- ☐ c) 75
- ☐ d) 100

No, the answer is incorrect.

Score: 0

Accepted Answers:

*c) 75*

6) Select the code snippet which performs unordered linear search iteratively? **1 point**

**Assignment  
Solution**

- ☐ a) `int unorderedLinearSearch(int arr[], int size, int data)`
- ```
{
    int index;
    for(int i = 0; i < size; i++)
    {
        if(arr[i] == data)
        {
            index = i;
            break;
        }
    }
    return index;
}
```
- ☐ b) `int unorderedLinearSearch(int arr[], int size, int data)`
- ```
{
    int index;
    for(int i = 0; i < size; i++)
    {
        if(arr[i] == data)
        {
            break;
        }
    }
    return index;
}
```
- ☐ c) `int unorderedLinearSearch(int arr[], int size, int data)`
- ```
{
    int index;
    for(int i = 0; i <= size; i++)
    {
        if(arr[i] == data)
        {
            index = i;
            continue;
        }
    }
    return index;
}
```
- ☐ d) None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

```

a) int unorderedLinearSearch(int arr[], int size, int data)
{
    int index;
    for(int i = 0; i < size; i++)
    {
        if(arr[i] == data)
        {
            index = i;
            break;
        }
    }
    return index;
}

```

7) What will be the output?

1 point

```

#include<stdio.h>
#define func1(a,b) a > b ? b : a
#define func2(a,b); {temp=a; a=b; b=temp;}
int main()
{
    int a=3,b=5,temp;
    if((3+func1(a,b)) > b)
    func2(a,b);
    printf("%d %d",a,b);
    return 0;
}

```

- ☐ a) 3 5
- ☐ b) 3 0
- ☐ c) 5 0
- ☐ d) 5 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) 5 3

8) Consider an array of elements arr[5]= {5,4,3,2,1} , what are the steps of insertions done while doing insertion sort in the array. 1 point

- a) 4 5 3 2 1
- ☐ 3 4 5 2 1
- 2 3 4 5 1
- 1 2 3 4 5

- b) 5 4 3 1 2  
☐ 5 4 1 2 3  
 5 1 2 3 4  
 1 2 3 4 5
- c) 4 3 2 1 5  
☐ 3 2 1 5 4  
 2 1 5 4 3  
 1 5 4 3 2
- d) 4 5 3 2 1  
☐ 2 3 4 5 1  
 3 4 5 2 1  
 1 2 3 4 5

No, the answer is incorrect.  
 Score: 0

Accepted Answers:

a) 4 5 3 2 1  
 3 4 5 2 1  
 2 3 4 5 1  
 1 2 3 4 5

9) What will be the output of the following C code?

1 point

```
#include <stdio.h>
#if A == 1
    #define B 0
#else
    #define B 1
#endif
int main()
{
    printf("%d", B);
    return 0;
}
```

- ☐ a) 0  
☐ b) 1  
☐ c) 01  
☐ d) None of the above

No, the answer is incorrect.  
 Score: 0

Accepted Answers:

b) 1

10

1 point

What will be the output?

```
#include <stdio.h>
#define a 10
int main()
{
    printf("%d ",a);
    int a=50;
    printf("%d ",a);
    return 0;
}
```

- ☐ a) 10 10
- ☐ b) 10 50
- ☐ c) 50 50
- ☐ d) Compilation error

No, the answer is incorrect.

Score: 0

Accepted Answers:

*d) Compilation error*