

Consider the array defined below:

```
int phoneno[5];
```

Which one of the following assignment is wrong?

(Choose one)

☐ `phoneno[1] = 1111;`

☐ `phoneno[2] = 2222;`

☐ `phoneno[2] = -2222;`

☒ `phoneno[5] = 5555;`

Which is the best way to make the loop exit in the middle?

(Choose one)



use goto statement



use break statement



use return statement



use recursion

Which among the following is a good code layout?

(Choose one)



```
float Calculate_Interest (  
double principal,  
float term_yrs,  
float rate_of_interest)
```



```
float Calculate_Interest ( double principal, float term_yrs, float rate_of_interest)
```



```
float  
Calculate_Interest  
(  
double principal,  
float term_yrs,  
float rate_of_interest  
)
```


Put these steps of building a program, in a correct sequence.

- i. Check the design
- ii. Check the code
- iii. Code the program
- iv. Design the program



(Choose one)



i, ii, iii, iv



ii, iii, iv, i



iv, i, iii, ii



iv, iii, i, ii

One has to think about efficiency of the program:

- i. While designing it
- ii. While constructing it

(Choose one)



Only i.



Only ii.



Both i & ii



Neither i nor ii

Which of these data structures can be used for sorting purpose?

(Choose one)



Graph



Linked list



Tree



Circular queue

The OS maintains a _____ data structure to keep the processes that are to be executed next in line.

(Choose one)



Linked list



Stack



Graph



Queue

Reducing the lines of code in a high-level language program may not improve the speed of the resulting machine code

(Choose one)



TRUE



FALSE

Reducing the lines of code in a high-level language program may not improve the speed of the resulting machine code

(Choose one)



TRUE



FALSE

It is better to use more number of global variables as they can be easily accessed from different routines.

(Choose one)



TRUE



FALSE

Which is the best way to make the loop exit in the middle?

(Choose one)

☐ use goto statement

☒ use break statement

☐ use return statement

☐ use recursion



Update Answer

Mark as Skipped

How can this following search algorithm improved further?

```
for (i=0; i<count; i++) {  
    if (a[i] == item) {  
        found=true;  
    }  
}
```

(Choose one)

- ☐ By reducing the value of count variable
- ☐ By changing the data type of array a
- ☒ By inserting a 'break' statement after 'found=true' within 'if'
- ☐ By inserting a 'break' statement after 'found=true' after 'if'

Update Answer

Mark as Skipped

How can this loop be further optimized?

```
sum = 0;  
for (i=1; i<=N; i++)  
    sum = sum + i;
```

(Choose one)

☐ sum = 1;
for (i=2; i<=N; i++)
 sum = sum + i;

☐ sum = 0;
for (i=1; i<N; i++)
 sum = sum + i;
sum = sum + N;

☐ sum = 0;
for (i=0; i<=N; i++)
 sum = sum + i;

☒ sum = N * (N+1)/2;

Update Answer

Mark as Skipped

What is the equivalent 'jammed loop' version for the following code?

```
for (i=0; i<10; i++)  
    sum1 = sum1 + i;  
for (i=0; i<20; i++)  
    sum2 = sum2 + i;
```

(Choose one)

☐ for (i=0; i<10; i++) {
 sum1 = sum1 + i;
 sum2 = sum2 + i;
}

☐ for (i=0; i<20; i++) {
 sum1 = sum1 + i;
 sum2 = sum2 + i;
}

☒ for (i=0; i<10; i++) {
 sum1 = sum1 + i;
 sum2 = sum2 + i;
}

Update Answer

Mark as Skipped

What type of loop would you use in these cases?

- i. No. of times to loop is unknown initially
- ii. No. of times to loop is known initially
- iii. loop body needs to be executed at least once

(Choose one)



i - while, ii - for, iii - for



i - while, ii - while, iii - for



i - while, ii - for, iii - do while



"for" loop for all

Update Answer

Mark as Skipped

What will be optimized version of this loop?

```
sum = 0;  
for (i=1; i<=N; i++)  
    sum = sum + i * j / k + 10;
```

(Choose one)



```
sum = 0;  
for (i=1; i<=N; i++)  
    sum = sum + i * (j / k) + 10;
```



```
sum = 0;  
m = j / k;  
for (i=1; i<=N; i++)  
    sum = sum + i * m + 10;
```

What's wrong with this loop?

```
i = 0;  
while (i < 10) {  
  
    i--;  
}
```

(Choose one)



Variable i should be used only for 'for' loops



It's an infinite loop



It should be `i = i - 1` rather than `i--`.



Nothing wrong

Which of the following statements would fit in the blank space below in this searching loop?

```
for (i = 0; i < N; i++){
```

```
    if (arr[i] == item){
```

```
        found = true;
```

```
        _____
```

```
    }
```

```
}
```

(Choose one)



continue



return



exit



break

Update Answer

Mark as Skipped

Which program might run faster?

(Choose one)



```
for (i=0; i<5; i++)  
    strarr[i] = "NULL";
```



```
for (i=0; i<4; i++)  
    strarr[i] = "NULL";  
strarr[4] = "NULL";
```



```
strarr[0] = "NULL";  
for (i=1; i<5; i++)  
    strarr[i] = "NULL";
```



```
strarr[0] = "NULL";  
strarr[1] = "NULL";  
strarr[2] = "NULL";
```

Update Answer

Mark as Skipped

What is the output of following program segment?

```
int option = 2;  
switch (option) {  
    case 1: printf("One");  
    case 2: printf("Two");  
    case 3: printf("Three");  
}
```

(Choose one)



One



Two



Two

Three

Update Answer

Mark as Skipped

What's wrong with following program segment?

```
const int Pi = 3.14;  
float area = 0, rad = 5;  
Pi = 6.28;  
area = Pi * rad * rad;
```

(Choose one)



'area' should be declared as 'int'



Value of 'Pi' cannot be changed



'Pi' should be assigned to 3.14 again



Area calculation method is wrong

Update Answer

Mark as Skipped

What will be printed if the value of $x=20$?

if $(x > 10 \text{ AND } x < 20)$

print HIGH

else

print LOW

(Choose one)

☐ HIGH

☒ LOW

☐ HIGH

LOW

☐ Nothing gets printed

Update Answer

Mark as Skipped

How many times the loop will get executed?

```
for (j=1; j>10; j++)
```

```
sum = sum + i;
```

(Choose one)



0



1



9



10

Which among the following is an example of a program statement?

- i. $a=0;$
- ii. $a + - b;$
- iii. $-b + a = a + b;$

(Choose one)

☒ i only

☐ ii only

☐ ii & iii only

☐ All are correct

Checking for ranges of values (e.g. range of marks deciding the grade) is possible using 'case switch' statements.

(Choose one)



TRUE



FALSE

Corrective maintenance activity in code construction comes after _____ activity

(Choose one)



System testing



Problem definition



Coding and debugging



System integration

Data types of variables cannot determine

(Choose one)



Type of data that can be stored



Amount of memory a variable occupies



Address where the variable can be stored in memory



The range of data that can be stored

Ideal data type to indicate customer's gender i.e. either Male or Female is

(Choose one)



Integer



Floating poing number



String array



Character