



Engr. Muhammad Waqas

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Max Marks: 30

- a) Give 3 reasons why it's important to comment your code. What are the 2 different ways to comment code in C++ and how are they different? (2 Marks)
  - b) What are the two different commands used to output a new line in C++? (2 Marks)
  - c) Show the difference between IF-ELSE and nested IF condition? (2 Marks)
  - d) What is a nested loop? Give a nested FOR loop example and the exact number of times the loop will run. (2 Marks)
2. Write a program (starting from #include) that asks the user for numbers 10 times, after the numbers have been entered, PRODUCT of all the numbers should be displayed. During the program if a positive number is entered it should continue and ask for another number, if a negative number is entered the program should end and output the PRODUCT of all the positive entries. A sample run should appear on the screen like the text below. (12 Marks)

```

Enter a number: 3
Enter a number: 10
Enter a number: 2
Enter a number: -213
The product of all your positive numbers is 60

```

3. The program below is supposed to compute the average of two numbers. The program compiles without error, but does not correctly compute the average. (5 Marks)

<pre> #include &lt;iostream&gt; using namespace std; void main() { int total=0; cout&lt;&lt;"Enter a number: "; int a; cin&gt;&gt;a; total = total + a; cout&lt;&lt;"Enter another number: "; </pre>	<p>b) What is the output of the following code? (5 Marks)</p> <pre> #include &lt;iostream&gt; using namespace std; void main(){ int i = 0; for(i=1; i&lt;19; i++){ for(int j=1; j&lt;2; j++){ i = i-3; </pre>
--	---

<pre> int b; cin&gt;&gt;b; total = total + a; double average = total / 2; cout&lt;&lt;"The average is "&lt;&lt;average&lt;&lt;"\n"; } </pre>	<pre> cout&lt;&lt;i&lt;&lt;endl; } } cout&lt;&lt;"Final Answer is = "&lt;&lt;i&lt;&lt;endl; } </pre>
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BE (Electrical)

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Q No 1(a)

Answer :- i) They help the person writing a program, and any one else who must read the source file, understand what's going on.

ii) If you see/edit code later, comment may help you to memorize your logic that you have written while written code.

iii) Comment are used for explanation of something.

There are two way of comment.

i) Single line comments

ii) Double line comments.

The // symbols is a single line comment



which tell the compiler to ignore  
the purpose. everything.

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The `/*` and `*/` pair of symbol denote  
multiple line comment.

Q No 1(b)

Answer:-

i) `endl;` is a a command used  
to move to the next line.

• `cout << endl;`

ii) For new line `\n` is also used.

c)

Answer). The `if else` statement executes two  
different codes depending upon  
whether the tested expression is true or false.

The nested `if else` statement allow you to  
check for multiples test expression and



~~Execu~~

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Execute different code for more than two conditions.

d)

Answer :- Nested loop means a loop

statement inside another loop. that why nested loop are also called as "loop inside loop".

Example:-

```
for (i = 0; i < Row; i++) {  
    for (j = 0; j < col; j++)  
        cout << matrix [i] [j]  
        cout << "\n";  
}
```



QNo(2)

Answer:-

```
#include <iostream>
using namespace std;
void main() {
    int a[10];
    int temp;
    int counter = 0;
    int answer = 1;
    for (int i = 0; i < 10; i++)
    {
        cout << "enter number" << i+1 << ": = ";
        cin >> temp;
        if (temp >= 0) {
            a[i] = temp;
            counter++;
        }
        else {
            break;
        }
    }
    for (int j = 0; j < counter; j++)
    {
        answer = answer * a[j];
    }
    cout << answer;
    return 0;
}
```



Q No 3(a) :-

Answer:-

```
#include <iostream>
using namespace std;
void main () {
```

```
int total = 0
```

```
cout << "Enter a number : " ;
```

```
int a ;
```

```
cin >> a ;
```

```
total = total + a ;
```

```
cout << "Enter another number : " ;
```

```
int b ;
```

```
cin >> b ;
```

```
total = total + b ;
```

```
double average = total / 2
```

```
cout << "The average is " << average << "\n" ;
```

Q No 3(b)

Answer: out put =>

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