


Philadelphia University Faculty of Engineering Department of Computer Engineering		Date:- 18/12/2016 Allowed time:- 50 Minutes
Programming Language (630263) Second Exam (solutions)		
Student Name: - ID: -		

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Lecture Time: 11:10 حتم 13:10 حتم 15:10 حتم 9:45 نر نر
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Question 1: Choose the correct answers for the following question. **5 points**

1- Which of the followings will execute at least once			
A) for statement	B) while statement	C) <u>do while statement</u>	D) if statement.
2- A is an Array of 13 elements Which of the followings will correctly display it.			
A) for(int i=0;i<14;i++) cout<<A[i];		B) <u>for(int i=0;i<=12;i++)</u> cout<<A[i];	
C) for(int i=1;i<14;i++) cout<<A[i];		D) for(int i=0;i<=13;i++) cout<<A[i];	
3- Which of the followings will display the numbers between 1 and 10			
A) <u>int x=0;</u> <u>while(x<=9)</u> cout<<++x;		B) int x=1; while(x<10) cout<<++x;	
C) int x=0; while(x<10) cout<<x++;		D) int x=1; while(x<10) cout<<x++;	
4- The output of the following loop is: <pre> int c=5; cout<<"st"; do { cout<<'o'; c--; }while(c<=5); </pre>			
A) St	B) sto	C) stop	D) <u>this is infinite loop</u>
5- The output of the following loop is: <pre> int j; for(j=10;j<=10;j++) cout<<j<<" "; cout<<j<<endl; </pre>			
A) 10	B) <u>10 11</u>	C) 10 10	D) 11 11

Question 2: Find the errors (logical or syntax) in the following pieces of codes then correct them (assume the required libraries are included) **3 points**

Code	Correction
float x[4]={0.0}; for(int i=1;i<=4;i++) x[i]+=3.2;	float x[4]={0.0}; for(int i=0;i<=3;i++) x[i]+=3.2;
int c; do { c++; cout<<c<<endl; }while(c<=10)	int c=1; do { c++; cout<<c<<endl; }while(c<=10);
int k; while(k<5) cout<<k<<endl; k++;	int k=1; while(k<5) {cout<<k<<endl; k++;}

Question 3: What is the output of the following pieces of code?

5 points

Code	Output
<pre>char ch='A'; switch(ch) { case 'a': cout<<"1111\n"; case 'b': cout<<"2222\n"; break; default: cout<<"3333\n"; case 'c': cout<<"4444\n"; }</pre>	<p>3333 4444</p>
<pre>int x=0,y=45; while(y>0) { y=y/2; x++; } cout<<"x="<<x;</pre>	<p>x=6</p>
<pre>int i,x; for(i=0,x=1;i<10;i+=2,x--) if(x*i<0) break; cout<<"x="<<x<<endl; cout<<"i="<<i<<endl;</pre>	<p>x=-1 i=4</p>
<pre>char ch[7]={'o','y','x','e','k','s','p'}; for(int i=1;i<7;i+=2) cout<<ch[i]; cout<<endl; cout<<ch[0]<<ch[4]<<endl;</pre>	<p>yes ok</p>
<pre>int Arr[6]={14,16,18,20,22,24}; for(int i=0;i<6;i++) if(Arr[i]%3==0) cout<<Arr[i]<<endl;</pre>	<p>18 24</p>

Question 4: Perform the following tasks.

2 points

<p>Declare a two dimension array of 3 rows and 4 columns of real values and then use for statements to initialize each element in the array</p>	<pre>float Arr[3][4]; for(int i=0;i<3;i++) for(int j=0;j<4;j++) Arr[i][j]=0.0;</pre>
<p>Rewrite the following if statement using switch statement</p> <pre>int x; cin>>x; if(x>=0&&x<2) cout<<"hello\n"; else if(x>=2&&x<4) cout<<"hi\n"; else cout<<"bay\n";</pre>	<pre>int x; cin>>x; switch(x) { case 0: case 1: cout<<"hello\n"; break; case 2: case 3: cout<<"hi\n"; break; default: cout<<"bay\n"; }</pre>

Question 5: Write a program that defines an array of 50 integer numbers. The program asks the user to enter the array elements. Then the program must find the largest element of the array and its position.

5 points

```
#include<iostream>
using namespace std;
void main()
{
    const int size=50;
    int Arr[size];
    int max,position;

    for(int i=0;i<size;i++)
        cin>>Arr[i];

    max=Arr[0];
    for(int i=0;i<size;i++)
    {
        if(Arr[i]>max)
        {
            max=Arr[i];
            position=i;
        }
    }
    cout<<"max="<<max<<endl;
    cout<<"Position="<<position<<endl;
}
```