

## BIL 104E QUIZ 6 (Section A)

1) Given the following pseudo code, write a program that executes it.(25)

- ☐ read x (from user)
- ☐ read y (from user)
- ☐ compute  $p=x*y$
- ☐ compute  $s=x+y$
- ☐  $\text{total}=s^2+p*(s-x)*(p+y)$
- ☐ print total

```
#include <iostream>
```

```
#include<cmath>
```

```
/* run this program using the console pauser or add your own getch, system("pause") or input loop */  
using namespace std;
```

```
int main(int argc, char** argv) {  
    int x, y;  
    int p, s;  
    double total;  
    cout<<"Enter the x value: ";  
    cin>>x;  
    cout<<endl;  
    cout<<"Enter the y value: ";  
    cin>>y;  
    p=x*y;  
    s=x+y;  
    total=pow(s,2)+p*(s-x)*(p+y);  
    cout<<"Total= "<<total;  
    return 0;  
}
```

2) Consider the following C++ program: What will the output of this program be?(25)

```
int main()
{
    int Control = 2;
    int Sum = 0;
    while (Control < 5)
    {
        for (int Inner = 1; Inner <= 2; Inner++)
        {
            Sum = Sum + Control;
        }
        Control = Control + Control;
        cout << "Control=" << Control << ", "
              << "Sum=" << Sum << endl;
    }
    cout << "Control=" << Control << ", "
          << "Sum=" << Sum << endl;
    return 0;
}
```

Output:

Control=4, Sum=4

Control=8, Sum=12

Control=8, Sum=12

3) Write a program which, given an array of integers, outputs the integer that appears most frequently in the array. E.g. for the array [ 1 2 3 2 3 4 2 5] your function should output 2. (50)

```
#include <iostream>
```

```
/* run this program using the console pauser or add your own getch, system("pause") or input loop */
```

```
using namespace std;
```

```
int main(int argc, char** argv) {
```

```
    int i,j,a[5];
```

```
    int popular = a[0];
```

```
    int temp=0, tempCount, count=1;
```

```
    cout << "Enter the elements: " << endl;
```

```
for(i=0;i<5;i++)
cin >> a[i];

for (i=0;i<5;i++)
{
tempCount = 0;
temp=a[i];
tempCount++;
for(j=i+1;j<5;j++)
{
if(a[j] == temp)
{
tempCount++;
if(tempCount > count)
{
popular = temp;
count = tempCount;
}
}
}
}

cout << "Most occured element is: " << popular;

return 0;

}
```