Question 1

What is the output of the following code?

a)

```
int value[5], *ptr, a;
ptr = value;
*ptr = 15;
ptr = &a;
a = 3;
value[1] = *ptr+4;
*(value+2) = 11;
*(ptr+3) = *ptr+6;
value[4] = 15;
for(int a = 0; a <= 4; a++)
   cout<<*(ptr+a)<<"\t";
```

b)

```
int a, b, c, *ptr1, *ptr2;
a = 5;
ptr2 = &a;
b = *ptr2 x 3 - 5;
ptr1 = &b;
ptr1 = ptr2;
*ptr1 = 6;
c = *ptr1 + 5;
cout<< a <<" "<< b <<" "<< c <<" "<< *ptr1 <<" "<< *ptr2 <<endl;
```

c)

```
int i = 42;
int j = 80;
int *p1;
int *p2;
p1 = &i;
p2 = &j;
*p1 = *p2;
cout << i << j << endl;
```

d)

```
int *p1;
int *p2;
int a,b,c;
a=8, b=10, c=12;
p1=&b;
p2=&c;
cout<<*p1<<endl;
cout<<*p2<<endl;
```

```
   p2=p1;
   cout<<*p1<<endl;
   cout<<*p2<<endl;
   a=5+*p1+*p2;
   cout<<a<<endl;
   p1=&a;
   p2=&b;
   *p2-=5;
   cout<<*p1<<endl;
   cout<<*p2<<endl;
   cout<<c<<endl;
```

e)

```
   int *a,*b,*c,d,e;
   a=&d;
   *a = 3+10;
   b=&e;
   *b=*a+3;
   c=b;
   d=*c + *a;
   *c=*a+e;
   cout<<*a<<" "<<*b<<" "<<*c<<" "<<d<<" "<<e;
```

f)

```
   int arr[5] = {1,2,3,4,5}, a, b, *ptr;
   ptr = arr;
   a = *ptr  + 10;
   ptr += 2;
   b = *ptr - 5;
   cout << *ptr << "\n" << a << "\n" << b << endl;
```

g)

```
   int *a,*b,*c,d,e;
   a=&d;
   *a = 3+10;
   b=&e;
   *b=*a+3;
   c=b;
   d=*c + *a;
   *c=*a+e;
   cout<<*b<<"   "<<*c<<"   "<<d<<"   "<<e;
```

i)

```
int m[5]={22,44,55};
int p;
int *n;
int *q;
n=m;
q=&p;
cout<<"n:"<<*n;
*q=*n+4;
cout<<"p:"<<p;
n[3]=*q*2;
cout<<"n:"<<n[3];
if(n[3]<n[2])
{
        n[4]=66;
}
cout<<"m:"<<m[4];
n=q;
*q=p/2;
cout<<"*q:"<<*q;
*n=m[0]+m[3];
cout<<"p:"<<p;
```

j)

```
int p=4;
int q=6;
int *x;
int *y;
x=&p;
y=&q;
*x=*x+*y;
x=y;
*x= ++ *y;
if(p>*x)
{
        x=&p;
        *y=*x+3;
}
cout<<"p:"<<p;
cout<<"q:"<<q;
cout<<"x:"<<*x;
cout<<"y:"<<*y;
```

j)

```
int a[4] = {2,4,6};
int *ptr, x=10, y=20, i;

ptr = a;
ptr[2] = x + (*ptr+1);
*ptr = y++;
int &z= x;
z = y + 2;
ptr = a;
*(ptr + 3) = *ptr + 2;

for(i = 0; i<4; i++)
  cout<<a[i]<<" ";
cout<<endl;

cout<<x<<" "<<y<<" "<<z<<" "<<endl;
```

k)

```
int num = 34;
int *p1, *p2, x=12, y, i;

p1 = &x;
y = *p1 * 2;
p2 = &num;
int &z = y;
num = z + 4;
*p1  = y++ + 3;
cout<<x<<" "<<y<<" "<<z<<" "<<" "<<*p1<<endl;
```

Question 2

Write a C program to input 10 integer value in an array and print array using pointers.

SAMPLE OUTPUT:
```
Enter 10 values:
1
2
3
4
5
6
7
8
9
10

1 2 3 4 5 6 7 8 9 10
```