PROGRAMS FOR POINTERS

1. #include<iostream>

```
using namespace std;
void cal(int x)
{
   x=x+10;
}
int main()
{
   int x=10;
   cal(x);
   cout<<x;
}
```

2. #include<iostream>

```
using namespace std;
int main() {
  int arr[20], i, j, k, size;
  cout<<"Enter any size of an array: ";
  cin>>size;
  cout<<endl<<"Accept numbers";
  for (i = 0; i < size; i++)
    cin>>arr[i];
  cout<<"Array with Unique list: ";
  for (i = 0; i < size; i++) {
    for (j = i + 1; j < size;) {
      if (arr[j] == arr[i]) {
        for (k = j; k < size; k++) {
          arr[k] = arr[k + 1];
        }
        size--;
      } else
        j++;
    }}
  for (i = 0; i < size; i++) {
    cout<<arr[i];
  }
  return (0);
}
```

3. #include<iostream>

```
using namespace std;
int main()
{
int *p,x=40;
p=&x;
cout<<"add of x="<<&x<<endl<<"and p="<<p;
cout<<endl<<"value of x="<<x<<endl<<" value at*(&x)="<<*(&x)<<endl<<" value of
*p="<<*p;
}
```

4. #include <iostream>

```
using namespace std;
int main()
{
 char a='b';
 char *ptr;
    cout<<"Original Value: "<<a;
  ptr=&a;
  cout<<endl<<"Address of a: "<<*ptr;
  cout<<endl<<"Original value : "<<a<<endl<<"Pointer value: "<<*ptr;
 *ptr='r';
cout<<endl<<"Changed value : "<<a;
return 0;
}
```

5. #include <iostream>

```
#include<conio.h>
using namespace std;
void DoIt(int *num)
      {
         *num=*num*2;
       }

int main()
        {
         int number=8;
        DoIt(&number);
          cout<<" Value of num: "<<number;
         getch();
return 0;
}
```

6. #include <iostream>

```
#include <conio.h>
using namespace std;
    int  main()
    {
    int ArrayA[3];//={1,2,3};
    int i;
    int *ptr;
     cout<<"Enter values for array: ";
     for(i=0;i<=2;i++)
     cin>>ArrayA[i];
    ptr=ArrayA;
            for(i=0;i<=2;i++)
            {
    cout<<"address: "<<ptr<<" - array value: "<<*ptr;
    ptr++;
    }
  }
```

7. #include <iostream>

```
#include <conio.h>
using namespace std;
int main()
{
   int x;          /* A normal integer*/
   int *p;         /* A pointer to an integer ("*p" is an integer, so p
           must be a pointer to an integer) */
   p = &x;         /* Read it, "assign the address of x to p" */
   cout<<"Enter value for x: ";
   cin>>x;         /* Put a value in x, we could also use p here */
   cout<<*p; /* Note the use of the * to get the value */
}
```

8. #include<iostream>

```
using namespace std;
int main()
{
 int *p,x=10;
 int **y;
 p=&x;
 y=&p;
 cout<<"&x="<<&x<<endl<<"p="<<p<<endl<<"*y="<<*y;
 cout<<"x="<<x<<endl<<"*p="<<*p<<endl<<"**y="<<**y;
 cout<<"&x="<<&x<<endl;
}
```

9. #include<iostream>
using namespace std;

```
void swap(int *, int *);  /*function declarations */
int main()
{
 int a=5, b=6;
cout<<"Before Swapping: a="<<a<<" b="<<b;
swap(&a, &b);                /*Calling functions by reference //passing the address */
cout<<endl<<"After Swapping: a="<<a<<" b="<<b;
}

void swap ( int *x, int *y)     /*Function Definitions */
{
  *x=*x+*y;
  *y=*x-*y;
  *x=*x-*y;

}
```