LAB PROGRAM-2 #include<stdio.h> #include<string.h> int index=0,pos=0,top=-1,length; char symbol,temp,infix[20],postfix[20],stack[20]; void infix_postfix(); void push(char symbol); char pop(); int pred(char symbol); int main(){ printf("Enter infix expression"); scanf("%s",infix); infix_postfix(); printf("infix expression=%s",infix); printf("postfix expression=%s",postfix); getch(); return(0); } void infix_postfix() { length=strlen(infix);

push('#');

{

while(index<length)

```
symbol=infix[index];
switch(symbol)
{
  case '(': push(symbol);
  break;
  case ')': temp=pop();
  while(temp!='(')
  {
    postfix[pos]=temp;
    pos++;
    temp=pop();
  }
  break;
  case'+':
  case'-':
  case '*':
  case'/':
    case'^':while(pred(stack[top])>=pred(symbol))
    {
      temp=pop();
      postfix[pos++]=temp;
    }
    push(symbol);
    break;
    default: postfix[pos++]=symbol;
}
```

```
index++;
}
while(top>0)
{
 temp=pop();
  postfix[pos++]=temp;
}
}
void push(char symbol)
   top=top+1;
   stack[top]=symbol;
}
 char pop()
{
   char symb;
   symb=stack[top];
   top=top-1;
   return(symb);
}
int pred(char symbol)
{
   int p;
   switch(symbol)
     case'^': p=3;
```

```
break;
case'/': p=2;
break;
case'*':
case'+':
case'-':p=1;
break;
case'(':p=0;
break;
case'#':p=-1;
break;
}
return(p);
}
```