ANSWERS TO PRACTICE QUESTIONS – STRING MANIPULATION

1.
```
S=input("Enter the string:")
S=S.lower()
v=c=0
for x in S:
    if x.isalpha():
        if x in "aeiou":
            v=v+1
        else:
            c=c+1
print("The number of vowels",v)
print("The number of consonants",c)
```

We convert it to lower case , then in that scenario we need not check for uppercase vowels

2.
```
S=input("Enter the string:")
c=0
for x in S:
    if x.isspace():
        c=c+1
print("The number of words",c+1)
```

OR

```
S=input("Enter the string:")
St=S.split()
print("The number of words",len(St))
```

len( ) function gives us the number of elements in the list. In this case no. of words

3.
```
S=input("Enter the string:")
i=0
j=len(S)-1
while i<j:
    if S[i]!=S[j]:
        print("It is not a pallindrome")
        break
    else:
        i+=1
        j-=1
else:
    print("It is a pallindrome")
```

Since variable i starts at the first letter and j starts at the last, and if we come across an element which is not the same at the i^{th} and the j^{th} index location, it definitely means not a palindrome

4.
```
S=input("Enter the string:")
St=S.split()
c=0
for x in St:
    if x[0] in "Aa":
        c=c+1
print("The number of words begining with A/a",c)
```

5.
```
S=input("Enter the string:")
St=S.split()
c=0
for x in St:
    if x[-1] in "Aa":
        c=c+1
print("The number of words ending with A/a",c)
```

6.
```
MNO=input("The mobile number must be in the format\
          cccc-nnnnnnnnnn where c is the 4 digit country\
          code and n is the 10 digit mobile number\
          \nEnter your mobile number:")
if len(MNO)!=15:
    print("Invalid Number")
else:
    country_code=MNO[:4]
    symbol=MNO[4]
    mob_number=MNO[5:]
    if country_code.isdigit() and symbol=="-" and mob_number.isdigit():
        print("Valid Number")
    else:
        print("InValid Number")
```

Here we use the slicing mechanism to extract the country code and mobile number separately from the given number.

7.
```
pwd=input("Enter the password:")
u=l=d=sp=0
if len(pwd)!=8:
    print("Invalid Password")
else:
    for x in pwd:
        if x.isupper():
            u+=1
        elif x.islower():
            l+=1
        elif x.isdigit():
            d+=1
        else:
            sp+=1
    if u<1 or l<1 or d<1 or sp<1:
        print("Invalid Password")
    else:
        print("Valid Password")
```

8.
```
S=input("Enter the string:")
St=S.split()
for x in St:
    if len(x)==4:
        print(x)
```

9.
```
S=input("Enter the string:")
St=S.split()
NS=""
for x in St:
    NS=NS+x[::-1]+" "
print("The changed string",NS)
```

This slicing mechanism gives the reverses of the string in variable x