Programming questions based on functions.

1. Write a Python function to find the Max of three numbers.

2. Write a Python function to sum all the numbers in a list.
Sample List : [8, 2, 3, 0, 7]
Expected Output : 20

3. Write a Python function to multiply all the numbers in a list.
Sample List : [8, 2, 3, -1, 7]
Expected Output : -336

4. Write a Python function to reverse a string.
Sample String : "1234abcd"
Expected Output : "dcba4321"

5. Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.

6. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.
Sample String : 'The quick Brow Fox'
Expected Output :
No. of Upper case characters : 3
No. of Lower case Characters : 12

7. Write a Python function that takes a list and returns a new list with unique elements of the first list.
Sample List : [1,2,3,3,3,3,4,5]
Unique List : [1, 2, 3, 4, 5]

8. Write a Python function that takes a number as a parameter and check the number is prime or not.
Note : A prime number (or a prime) is a natural number greater than 1 and that has no positive divisors other than 1 and itself.

9. Write a Python function which takes a list of no. as a parameter   and print the even numbers from a given list.
Sample List : [1, 2, 3, 4, 5, 6, 7, 8, 9]
Expected Result : [2, 4, 6, 8]

10. Write a function INDEX_LIST(L), where L is the list of elements passed as argument to the function. The function returns another list named 'indexList' that stores the indices of all Non-Zero Elements of L.

For example:

If L contains [12,4,0,11,0,56]

The indexList will have - [0,1,3,5]

11. Predict the output of the Python code given below:

```
def Diff(N1,N2):
      if N1>N2:
              return N1-N2
      else:
              return N2-N1
NUM= [10,23,14,54,32]
for CNT in range (4,0,-1):
      A=NUM[CNT]
      B=NUM[CNT-1]
      print(Diff(A,B),'#', end=' ')
```

12. Rao has written a code to input a number and check whether it is prime or not. His code is having errors. Rewrite the correct code and underline the corrections made.

```
def prime():
      n=int(input("Enter number to check :: ")
      for i in range (2, n//2):
              if n%i=0:
                      print("Number is not prime \n")
              break
              else:
                      print("Number is prime \n')
```