CHAPTER 1, 2 & 3

PYTHON REVISION TOUR I & II, WORKING WITH FUNCTIONS

ERROR FINDING QUESTIONS

Q1. Find error in the following code(if any) and correct code by rewriting code and underline the correction;-

```
x= int("Enter value of x:")
for in range [0,10]:
   if x=y
print( x + y)
   else:
print( x-y)
```

Q2. Rewrite the following program after finding and correcting syntactical errors and underlining it.

```
a, b = 0
if (a = b)
a +b = c
print( z)
```

Q3. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
250 = Number
WHILE Number<=1000:
    if Number=>750
        print (Number)
        Number=Number+100
    else
        print( Number*2)
Number=Number+50
```

Q4. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
Val = int(rawinput("Value:"))
Adder = 0
for C in range(1,Val,3)
        Adder+=C
        if C%2=0:
                Print (C*10)
        Else:
                print (C*)
print (Adder)
```

Q5. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
25=Val
for I in the range(0,Val)
        if I%2==0:
                print( I+1)
        Else:
                print (I-1
```

Q6. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
STRING=""WELCOME
NOTE""
for S in range[0,8]:
        print (STRING(S))
```

Q7. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
a=int{input("ENTER FIRST NUMBER")}
b=int(input("ENTER SECOND NUMBER"))
c=int(input("ENTER THIRD NUMBER"))
if a>b and a>c
  print("A IS GREATER")
if b>a and b>c:
  Print(" B IS GREATER")
if c>a  and c>b:
  print(C IS GREATER)
```

Q8. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
i==1
a=int(input("ENTER FIRST NUMBER"))
FOR i in range[1, 11];
  print(a,"*=", i ,"=",a * i)
```

Q9. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
a=”1”
while a>=10:
        print("Value of  a=",a)
        a=+1
```

Q10. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
Num=int(rawinput("Number:"))
sum=0
for i in range(10,Num,3)
Sum+=1
if i%2=0:
     print(i*2)
  Else:
print(i*3 print Sum)
```

Q11. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
weather='raining'
if weather='sunny':
        print("wear sunblock")
elif weather='snow':
        print("going skiing")
else:
        print(weather)
```

Q12. Write the modules that will be required to be imported to execute the following code in Python.

```
def main( ):
for i in range (len(string)) ):
if string [i] = = '' "
        print
else:
        c=string[i].upper()
print( "string is:",c)
print ("String length=",len(math.floor()))
```

Q13. Observe the following Python code very carefully and rewrite it after removing all syntactical errors with each correction underlined.

```
DEF execmain():
x = input("Enter a number:")
if (abs(x)=x):
   print ("You entered a positive number")
else:
x=*-1
  print "Number made positive:"x
execmain()
```

Q14. Rewrite the following code in python after removing all syntax error(s).Underline each correction done in the code

```
x=integer(input('Enter 1 or 10'))
if x==1:
for x in range(1,11)
        Print(x)
Else:
        for x in range(10,0,-1):
                print(x)
```

Q15. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
30=To
for K in range(0,To)
        IF k%4==0:
                print (K*4)
        else
                print (K+3)
```

OUTPUT FINDING QUESTIONS

Q1. Find output generated by the following code:

```
p=10
q=20
p*=q//3
q+=p=q**2
print(p, q)
```

Q2. Find output generated by the following code:

```
String Str=”Computer”
Str[-4:]
Str*2
```

Q3. Find out the output of the Following –

```
x=20
x=x+5
x=x-10
print (x)
x, y=x-1,50
print (x, y)
```

Q4. Find out the output of the Following –

```
for a in range(3,10,3):
        for b in range(1,a,2):
                print(b, end=’ ‘)
        print( )
```

Q5. FIND OUTPUT OF FOLLOWING

```
x=10
y=5
for i in range(x-y*2):
   print("%",i)
```

Q6. Find output generated by the following code:

```
x="one"
y="two"
c=0
while c<len(x):
   print(x[c],y[c])
   c=c+1
```

Q7. Find output generated by the following code:

```
for i in range(-1,7,2):
for  j in range(3):
      print(i,j)
```

Q8. Find output generated by the following code:

```
string=”aabbcc”
count=3
while True:
   if string[0]=='a':
      string=string[2:]
   elif string[-1]=='b':
      string=string[:2]
   else:
      count+=1
      break
print(string)
print(count)
```

Q9. Find output generated by the following code:

```
x="hello world"
print(x[:2],x[:-2],x[-2:])
print(x[6],x[2:4])
print(x[2:-3],x[-4:-2])
```

Q10. Find and write the output of the following python code :

```
Msg1="WeLcOME"
Msg2="GUeSTs"
Msg3=""
for I in range(0,len(Msg2)+1):
        if Msg1[I]>="A" and Msg1[I]<="M":
                Msg3=Msg3+Msg1[I]
        elif Msg1[I]>="N" and Msg1[I]<="Z":
                Msg3=Msg3+Msg2[I]
        else:
                Msg3=Msg3+"*"
print Msg3
```

Q11. Find and write the output of the following python code :

```
def Changer(P,Q=10):
        P=P/Q
        Q=P%Q
        print P,"#",Q
        return P
A=200
B=20
A=Changer(A,B)
print A,"$",B
B=Changer(B)
print A,"$",B
A=Changer(A)
print A,"$",B
```

Q12. Find and write the output of the following python code:

```
Data = ["P",20,"R",10,"S",30]
Times = 0
Alpha = ""
Add = 0
for C in range(1,6,2):
        Times= Times + C
        Alpha= Alpha + Data[C-1]+"$"
        Add = Add + Data[C]
print Times,Add,Alpha
```

Q13. Find and write the output of the following python code:

```
Text1="AISSCE 2018"
Text2=""
I=0
while I<len(Text1):
   if Text1[I]>="0" and Text1[I]<="9":
         Val = int(Text1[I])
         Val = Val + 1
         Text2=Text2 + str(Val)
elif  Text1[I]>="A" and Text1[I] <="Z":
        Text2=Text2 + (Text1[I+1])
else:
         Text2=Text2 + "*"
   I=I+1
print Text2
```

Q14. Find and write the output of the following python code:

```
TXT = ["20","50","30","40"]
CNT = 3
TOTAL = 0
for C in [7,5,4,6]:
    T = TXT[CNT]
    TOTAL = float (T) + C
    print TOTAL
    CNT-=1
```

Q15. Find output generated by the following code:

```
line = "I'll come by then."
eline = ""
for i in line:
   eline += chr(ord(i)+3)
print(eline)
```

Q16. Find output generated by the following code:

```
line =  "What will have so will"
L = line.split('a')
for i in L:
   print(i, end=' ')
```

Q17. Find output generated by the following code:

```
p=5/2
q=p*4
r=p+q
p+=p+q+r
q-=p+q*r
print(p,q,r)
```

Q18. Find output generated by the following code:

```
a=(2 + 3) ** 3 – 6 / 2
 b=(2 + 3) * 5// 4 + (4 + 6) / 2
 c=12 + ( 3 * 4 – 6 ) / 3
d=12 % 5 * 3 + (2 * 6) // 4
print(a, b, c, d)
```

Q19. Find the output of the following:

```
def main( ) :
    Moves=[11, 22, 33, 44]
    Queen=Moves
Moves[2]+=22
L=Len(Moves)
for i in range (L)
          print “Now@”, Queen[L-i-1], “#”, Moves [i]
```

Q20. Find the output of the following

```
L1 = [100,900,300,400,500]
START = 1
SUM = 0
for C in range(START,4):
      SUM = SUM + L1[C]
print(C, ":", SUM)
      SUM = SUM + L1[0]*10
print(SUM)
```

Q21. Find and write the output of the following python code:

```
def fun(s):
k=len(s) m=" "
for i in range(0,k): if(s[i].isupper()):
        m=m+s[i].lower()
elif s[i].isalpha():
        m=m+s[i].upper()
else:
        m=m+'bb' print(m)
fun('school2@com')
```

Q22. Find the output of the give program :

```
def Change(P ,Q=30):
        P=P+Q
        Q=P-Q
        print( P,"#",Q)
        return (P)
R=150
S=100
R=Change(R,S)
print(R,"#",S)
S=Change(S)
```

Q23. Find the output of the give program :

```
x = "abcdef"
i = "a"
while i in x:
        print(i, end = " ")
```

QUESTIONS BASED ON TUPLE

Q1: Find the output of following codes

1.
```
t1=("sun","mon","tue","wed")
```
   a. `print(t1[-1])`

2.
```
t2=("sun","mon","tue","wed","thru","fri")
for i in range (-6,2):
        print(t2[i])
```

3.
```
t3=("sun","mon","tue","wed","thru","fri")
if "sun" in t3:
    for i in range (0,3):
        print(t2[i])
else:
    for i in range (3,6):
        print(t2[i])
```

4.
```
t4=("sun", "mon", "tue", "wed", "thru", "fri")
if "sun" not in t4:
    for i in range (0,3):
        print(t4[i])
else:
    for i in range (3,6):
        print(t4[i])
```

5. t5=("sun",2,"tue",4,"thru",5)
```
if "sun" not in t4:
    for i in range (0,3):
        print(t5[i])
else:
    for i in range (3,6):
        print(t5[i])
```

6. t6=('a','b')
   t7=('p','q')
   t8=t6+t7
   print(t8*2)

7. t9=('a','b')
   t10=('p','q')
   t11=t9+t10
   print(len(t11*2))

8. t12=('a','e','i','o','u')
   p, q, r, s, t=t12
   print("p= ",p)
   print("s= ",s)
   print("s + p", s + p)

9. t13=(10,20,30,40,50,60,70,80)
   t14=(90,100,110,120)
   t15=t13+t14
   print(t15[0:12:3])

Q2. Find the errors

1. t1=(10,20,30,40,50,60,70,80)
   t2=(90,100,110,120)
   t3=t1*t2
   Print(t5[0:12:3])

2. t1=(10,20,30,40,50,60,70,80)
   i=t1.len()
   Print(T1,i)

3. t1=(10,20,30,40,50,60,70,80)
   t1[5]=55
   t1.append(90)
   print(t1,i)

4. t1=(10,20,30,40,50,60,70,80)
   t2=t1*2
   t3=t2+4
   print t2,t3

5. t1=(10,20,30,40,50,60,70,80)
   str=””
   str=index(t1(40))
   print(“index of tuple is ”, str)
   str=t1.max()
   print(“max item is “, str)

LIST BASED QUESTION

Q1. Give the output of the following code:-

```
list=['p','r','o','b','l','e','m']
list[1:3]=[]
print(list)
list[2:5]=[]
print(list)
```

Q2. Give the output of the following code:-

```
l1=[13,18,11,16,13,18,13]
print(l1.index(18))
print(l1.count(18))
l1.append(l1.count(13))
print(l1)
```

Q3. Find the error in following code. State the reason of the error.

```
aLst = { ‘a’:1 ,’ b’:2, ‘c’:3 }
print (aLst[‘a’,’b’])
```

Q4. Find the error in following code. State the reason of the error.

```
list1 =[1998, 2002, 1997, 2000]
list2 =[2014, 2016, 1996, 2009]
print"list1 + list 2 = : ", list1 +list2   #statement 1
print"list1 * 2 = : ", list1 *2            #statement 2
```

Q5. What is the output of the following:

```
list1 = [1, 2, 3, 4, 5]
list2 =list1
list2[0] =0;
print("list1= : ", list1)
```

Q6. What is the output of the following:

```
data =[2, 3, 9]
temp =[[x forx in[data]] forx inrange(3)]
print(temp)
```

a) [[[2, 3, 9]], [[2, 3, 9]], [[2, 3, 9]]]
b) [[2, 3, 9], [2, 3, 9], [2, 3, 9]]
c) [[[2, 3, 9]], [[2, 3, 9]]]
d) None of these

Q7. What is the output of the following:

```
Temp =[‘Geeks’, ‘for’, ‘Geeks’]
arr =[i[0].upper() fori intemp]
print(arr)
```

a) [‘G’, ‘F’, ‘G’]
b) [‘GEEKS’]
c) [‘GEEKS’, ‘FOR’, ‘GEEKS’]
d) Compilation error

Q8. What will be the output?

1. d1 ={"john":40, "peter":45}
2. d2 ={"john":466, "peter":45}
3. d1 > d2

a) TRUE
b) FALSE
c) ERROR
d) NONE

Q9. What will be the error of the following code Snippet?

```
Lst =[1,2,3,4,5,6,7,8,9]
Lst[::2]=10,20,30,40,50,60
Print[Lst]
```

Q10. Find the error in following code. State the reason of the error

```
aLst={'a':1,'b':2,'c':3}
print(aLst['a','b'])
```

Q11. What Will Be The Output Of The Following Code Snippet?

```
a =[1,2,3,4,5]
print(a[3:0:-1])
```

A. Syntax error
B. [4, 3, 2]
C. [4, 3]
D. [4, 3, 2, 1]

Q12. What Will Be The Output Of The Following Code Snippet?

```
fruit_list1 = ['Apple', 'Berry', 'Cherry', 'Papaya']
fruit_list2 = fruit_list1
fruit_list3 = fruit_list1[:]
fruit_list2[0] = 'Guava'
fruit_list3[1] = 'Kiwi'
sum = 0
for ls in (fruit_list1, fruit_list2, fruit_list3):
   if ls[0] == 'Guava':
      sum += 1
   if ls[1] == 'Kiwi':
      sum += 20
print (sum)
```

A. 22
B. 21
C. 0
D. 43

Q13. What Will Be The Output Of The Following Code Snippet?

```
a = {(1,2):1,(2,3):2}
print(a[1,2])
```

A. Key Error
B. 1
C. {(2,3):2}
D. {(1,2):1}

Q14. What Will Be The Output Of The Following Code Snippet?

```
my_dict = {}
my_dict[1] = 1
my_dict['1'] = 2
my_dict[1.0] = 4
sum = 0
for k in my_dict:
   sum += my_dict[k]
print (sum)
```

A. 7
B. Syntax error
C. 3
D. 6

Q15. What Will Be The Output Of The Following Code Snippet?

```
my_dict = {}
my_dict[(1,2,4)] = 8
my_dict[(4,2,1)] = 10
my_dict[(1,2)] = 12
sum = 0
for k in my_dict:
   sum += my_dict[k]
print (sum)
print(my_dict)
```

A. Syntax error
B. 30
{(1, 2): 12, (4, 2, 1): 10, (1, 2, 4): 8}
C. 47
{(1, 2): 12, (4, 2, 1): 10, (1, 2, 4): 8}
D. 30
{[1, 2]: 12, [4, 2, 1]: 10, [1, 2, 4]: 8}

OUTPUT AND ERROR BASED QUESTIONS ON FUNCTIONS IN PYTHON

Q. Identify the errors, underline it and correct the errors

a)
```
Def Sum(a=1,b)
        return a+b
print (“The sum =” Sum(7, -1)
```

b)
```
def main ( )
print ("hello")
```

c)
```
def func2() :
        print (2 + 3)
func2(5)
```

Q1. Find the output of the following numbers:
```
Num = 20
Sum = 0
for I in range (10, Num, 3)
        Sum+=i
        if i%2==0:
                print i*2
        else:
                print i*3
```

Q2. Find the output of the following
```
Text=”gmail@com”
L=len(Text)
ntext=” “
for i in range (0,L):
        if   text[i].isupper():
                ntext=ntext+text[i].lower()
        elif text[i].isalpha():
                ntext=ntext+text[i].upper()
        else:
                ntext=ntext+’bb’
```

Q3. Find the output of the following-
```
def  power (b , p):
        r = b ** P
        return r

def calcSquare(a):
        a = power (a, 2)
        return a

n = 5
result = calcSquare(n)
print (result)
```

Q4. Find the output of the following-
```
import math
print (math. Floor(5.5))
```

Q5. Find the output

```
def gfg(x,l=[]) :
        for I in range(x):
                l.append(i*i)
                print(l)
gfg(2)
gfg(3,[3,2,1])
gfg(3)
```

Q6. Find the output of the following-

```
count =1
def  dothis():
        global count
        for I in (1,2,3)
        count+=1
dothis( )
print count
```

Q7. Find the output of the following-

```
def addem(x,y,z):
Print(x+y+z)
def prod(x,y,z):
return x*y*z
A=addem(6,16,26)
B=prod(2,3,6)
Print(a,b)
```

Q8.

```
def Func(message,num=1):
    print(message*num)
Func('python')
Func('easy',3)
```

Q9.

```
def Check(n1=1,n2=2)
n1=n1+n2
n2+=1
print(n1,n2)

Check( )
Check(2,1)
Check(3)
```

Q. 10.

```
a=10
def call( ):
        global a
        a=15
        b=20
        print(a)
call( )
```

11. Write a user defined function **GenNum(a, b)** to generate odd numbers between a and b (including b)

12. Write definition of a method/function **AddOdd(VALUES)** to display sum of odd values from the list of VALUES.

13. Write definition of a Method MSEARCH(STATES) to display all the state names from a list of STATES, which are starting with alphabet M.
    For example:
    If the list STATES contains ["MP","UP","MH","DL","MZ","WB"]
    The following should get displayed
    MP
    MH
    MZ
14. Write a python function generatefibo(n) where n is the limit, using a generator function Fibonacci (max)(where max is the limit n) that produces Fibonacci series.

15. Write a definition of a method COUNTNOW(PLACES) to find and display those place names, in which here are more than 7 characters.
    For example :
    If the list PLACES contains. **["MELBORN","TOKYO","PINKCITY","BEIZING","SUNCITY"]**
    The following should get displayed :**PINKCITY**

GENERAL THEORY QUESTIONS

1. Differentiate between the round( ) and floor( ) functions with the help of suitable example.

2. Which string method is used to implement the following:
    a. To count the number of characters in the string
    b. To change the first character of the string in capital letter
    c. To change lowercase to uppercase letter
    d. To check whether the given character is letter or a number

3. What are default arguments ?
4. What is the difference between actual and formal parameters ?
5. What is a recursive function ?
6. What is the difference between built-in functions and modules?
7. What is the difference between local variable and global variable?
8. What are the advantages of writing functions with keyword arguments ?
9. What do you mean by scope of variables ?
10. **Which of the following is valid arithmetic operator in Python:**
    (i)// (ii)**?** (iii)**<** (iv)and

11. **Write the type of tokens from the following:**
    (i) if (ii) roll_no

12. **Which of the following are valid operators in Python:**
    (i) ** (ii) */ (iii) like (iv) ||
    (v) is (vi) ^ (vii) between (viii) in

13. **Which of the following can be used as valid variable identifier(s) in Python?**
    (i) 4thSum (ii) Total
    (iii) Number# (iv) _Data

ANSWERS
Error Finding Answers

Ans 1. Correct code:-

```
x= int(input("Enter value of x:"))
for in range (0,10):
if x==y:
print( x+y)
   else:
print (x-y)
```

Ans 2.

```
a,b = 0,0
if (a = =b) :
c=a +b
   print(c)
```

Ans 3.

```
Number = 250
while Number<=1000:
        if Number >= 750:
                print (Number)
                Number = Number+100
        else:
                print (Number*2)
Number = Number+50
```

Ans 4.

```
Val = int(raw_input("Value:"))          # Error 1
Adder = 0
for C in range(1,Val,3) :               # Error 2
Adder+=C
if C%2==0 :                             # Error 3
        print( C*10  ) # Error 4
else:                                   # Error 5
        print (C ) # Error 6
print Adder
```

Ans 5.

```
Val = 25                                #Error 1
for I in range(0,Val):                  #Error 2 and Error 3
        if I%2==0:
                print (I+1)
        else:                           #Error 4
                print (I-1)
```

Ans 6. CORRECTED CODE:-

```
STRING= "WELCOME"
NOTE=" "
for S in range (0, 8) :
print (STRING [S])
```

Also range(0,8) will give a runtime error as the index is out of range. It shouldbe range(0,7)

Ans 7.

```
a=int(input("ENTER FIRST NUMBER"))
b=int(input("ENTER SECOND NUMBER"))
c=int(input("ENTER THIRD NUMBER"))
if a>b and a>c:
        print("A IS GREATER")
if b>a and b>c:
        print(" B IS GREATER")
if c>a  and c>b:
        print(" C IS GREATER ")
```

Ans 8. CORRECTED CODE

```
i=1
a=int(input("ENTER FIRST NUMBER"))
for i in range(1,11):
        print(a,"*=",i,"=",a*i)
```

Ans 9. CORRECTED CODE

```
a=1
while a<=10:
print("Value of  a=",a)
a+=1
```

Ans 10. CORRECTED CODE

```
Num=int(input("Number:"))
sum=0
for i in range(10,Num,3):
sum+=1
  if i%2==0:
    print(i*2)
else:
    print(i*3)
print(sum)
```

Ans. 11 Corrected Code

```
weather='raining'
if weather=='sunny':
print("wear sunblock")
elif weather=='snow':
print("going skiing")
else:
  print(weather)
```

Ans.12. Math module and String module

Ans 13. Corrected code:

```
def execmain():
x= input("Enter a number:") (indentation)
if(abs(x)== x):
print("You entered a positive number")
else:
x *= -1(indentaion)
print("Number made positive:" , x)
execmain()
```

ANS:-14

```
x=int(input('Enter 1 or 10'))
if x==1:
        for x in range(1,11):
                print(x)
        else:
                for x in range(10,0,-1):
print(x)(indentation)
```

Ans 15.

```
To=30
for K in range(0,To) :
        if k%4==0:
                print (K*4)
        else:
                print (K+3)
```

OUTPUT

1. Output:- 60, 480

2. ANS uter
'ComputerComputer'

3. ANS: 15
14, 50

ANS 4: 1
1 4
1 4 7

ANS 5:- NO OUTPUT

Ans 6.: o t
n w
e o

ANS 7: -1 0
-1 1
-1 2
1 0
1 1
1 2
3 0
3 1
3 2
5 0
5 1
5 2

Ans. 8 bbcc
4

Ans 9: he hello wor ld
w ll
llo wo or

ANS 10. G*L*TME

Ans 11. 10 # 10
10 $ 20
2 # 2
10 $ 2
1 # 1
1 $ 2

Ans 12- 1 20 P$
4 30 PR
9 60 PRS$

Ans 13.- ISSCE*3129

ANS 14. 47.0
35.0
54.0
26.0

ANS 15. L*oo#frph#e|#wkhq1

ANS 16. Wh t will h ve so will

Ans 17. (27.5 - 142.5 12.5)

Ans 18. (122.0 11.0 14.0 9)

Ans 19. Now @ 44 # 11
Now @ 55 # 22
Now @ 22 # 55
Now @ 11 # 44

Ans 20. 1:900
1900
3200
3:3600
4600

Ans 21. SCHOOLbbbbCOM

Ans 22. 250 #150
250 #100
130 #100

Ans 23. -- aaaaaa **OR** infiniteloop

OUTPUTS(TUPLES)

1. wed

2.
sun
mon
tue
wed
thru
fri
sun
mon

3.
sun
Mon
Tue

4.
wed
thru
fri

5.
4
thru
5

6. ('a', 'b', 'p', 'q', 'a', 'b', 'p', 'q')

7. 8

8.
p= a
s= o
s + p oa

9. 10, 40, 70, 100

ERROR TUPLES

Ans 1 a. ti*t2 cant multiply
b. P is in uppercase in print command
c. t5 is not defined

Ans 2 a. len() is used wrongly
b. P is in uppercase in print command
c. T1 is not defined

Ans 3 a. 'tuple' object does not support item assignment in line 2
b. Append() Method is not with tuple

Ans. 4 a) line 3 cannot concatenate with int
b) Parenthesis is missing in line 4

Ans 5 a. Syntax error in index function
b. Syntax error in max function

ANSWERS BASED ON LIST

Ans.1 ['p','b','l','e','m']
['p','b']

Ans. 2
1
2
[13,18,11,16,13,18,13,3]

Ans 3: The above code will produce KeyError, the reason being that there is no key same as the list ['a','b']

Ans 4. list1 + list 2 = : [1998, 2002, 1997, 2000, 2014, 2016, 1996, 2009]
list1 * 2 = : [1998, 2002, 1997, 2000, 1998, 2002, 1997, 2000]

Ans 5. List1:[0,2,3,4,5]

Ans 6. (a)

Explanation: [x for x in[data] returns a new list copying the values in the list data and the outer for statement prints the newly created list 3 times.

Ans7. a

Ans 8. Type Error

Ans 9. ValueError: attempt to assign sequence of size 6 to extended slice of size 5

Ans 10. The above code produce KeyError, the reason being that there is no key same as the list['a','b'] in dictionary aLst

Ans 11. B

Ans 12. A

Ans 13. B

Ans 14. D

Ans 15. B

FUNCTIONS (ERROR)

Ans 1: def sum(a=1,b) :
    return a+b (indentation)
print ("The sum =", Sum(7,-1))

Ans 2: def main ( ):
    print ("hello")

Ans 3: def func2() :
    print (2 + 3)
func2() no parameter is to be passed

1. output: 20
39
32
57

2. Output: GMAILbbCOM

3. output: 25

4. output: 6

5. output: [0,1]
[3,2,1,0,1,4]
[0,1,0,1,4]

6. output: 4

7. output: 36

8. output: python
easyeasyaesy

9. Output: 3 3
3 2
5 3

10. 15

11.
```
def getNum(a,b):
    for i in range(a,b+1):
        if i%2==1:
            print(i)
```

12.Ans
```
def AddOdd(Values):
    n=len(NUMBERS)
    s=0
    for i in range(n):
        if (i%2!=0):
            s=s+NUMBERS[i]
            print(s)
```

13. Ans
```
def MSEARCH(STATES):
    for i in STATES:
        if i[0]=='M':
            print i
```

14.
```
def Fibonacci (max):
    a, b = 0, 1
    while a <=max:
        yield a,
    a,b = b,a+b
def generatefibo(n):
    for i in Fibonacci (n):
        print( i)
```

15. Ans.
```
l =["MELBORN","TOKYO","PINKCITY","BEIZING","SUNCITY"]
def countno(m):
    length=len(m)
    for i in range(0,length):
        if len(m[i])>7:
            print(m[i])
countno(l)
```

GENERALQUESTIONS

Ans1. The round( ) function is used to convert a fractional number into whole as the nearest next whereas the floor( ) is used to convert to the nearest lower whole number.
E.g. round(5.8) = 6 and floor(5.8)= 5

Ans2. a. len(str) b. str.capitalize( )
c. str.upper( ) d. ch.isalnum( )

Ans3. Default arguments are used in function definition, if the function is called without the argument, the default argument gets its default value.

Ans 4. Actual parameters are those parameters which are used in function call statement and formal parameters are those parameters which are used in function header (definition).

```
e.g.  def sum(a,b):                 # a and b are formal parameters
          return a+b
      x, y = 5, 10
      res = sum(x,y)                # x and y are actual parameters
```

Ans 5. Recursion is a way of programming or coding a problem, in which a function calls itself one or more times in its body. Usually, it is returning the return value of this function call. If a function definition fulfils the condition of recursion, we call this function a recursive function.

Example:
```
4! = 4 * 3!
3! = 3 * 2!
2! = 2 * 1

def factorial(n):
    if n ==1:
        return 1
    else:
        return n*factorial(n-1)
```

Ans 6: Built in functions can be used directly in a program in python, but in order to use modules, we have to use import statement to use them.

Ans 7.

Sno.	LOCAL VARIABLE	GLOBAL VARIABLE
1	It is a variable which is declared within a function or within a block.	It is a variable which is declared outside all the functions.
2	It is accessible only within a function/ block in which it is declared.	It is accessible throughtout the program.

For example,

```
def change():
    n=10                # n is a local variable
x=5                     # x is a global variable
print( x)
```

Ans 8. i) using the function is easier as we do not need to remember the order of the arguments.
ii) we can specify values of only those parameters which we want to give, as other parameters have default argument values

Ans9. Scope of variables refers to the part of the program where it is visible, i.e, the area where you can use it

Ans10. (i)

Ans 11. i) Keyword
ii)identifier

Ans 12. i) iv) vi) viii)

Ans 13. ii) and iv)