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**INTERNATIONAL INDIAN SCHOOL BURAIDAH**  
**Worksheet(4) for the Academic Year 2024-25**  
**CLASS: XII SUBJECT: Computer Science**  
**LESSON 3-FUNCTIONS**

1 Function name must be followed by \_\_\_\_\_

Ans ()

2 \_\_\_\_\_ keyword is used to define a function

Ans def

3 Function will perform its action only when it is \_\_\_\_\_

Ans Called / Invoked or any other word with similar meaning

4 **Write statement to call the function.**

```
def Add():  
    X = 10 + 20  
    print(X)  
_____  
#statement to call the above function
```

Ans Add()

5 **Write statement to call the function.**

```
def Add(X,Y):  
    Z = X+Y  
    print(Z)  
_____  
#statement to call the above function
```

Ans Add(10,20) # Parameter value is user dependent

6 **Write statement to call the function.**

```
def Add(X,Y):  
    Z = X+Y  
    return Z  
_____  
#statement to call the above function
```

print("Total =",C)

Ans C = Add(10,20) # Parameter value is user dependent

7 **Which Line Number Code will never execute?**

```
def Check(num):  
    if num%2==0:  
        print("Hello")  
        return True  
        print("Bye")  
    else:  
        return False
```

#Line 1

#Line 2

#Line 3

#Line 4

#Line 5

#Line 6

#Line 7

C = Check(20)

print(C)

Ans Line 5

8 **What will be the output of following code?**

```
def Cube(n):  
    print(n*n*n)
```

```
Cube(n)          # n is 10 here  
print(Cube(n))
```

Ans 1000  
1000  
None

9 What are the different types of actual arguments in function? Give example of any one of them.

Ans 1. Positional  
2. Keyword  
3. Default  
4. Variable length argument

Example : (Keyword argument)  
def Interest(principal,rate,time):  
 return (principal\*rate\*time)/100

R = Interest(rate=.06, time=7,principal=100000)

10 **What will be the output of following code:**

```
def Alter(x, y = 10, z=20):  
    sum=x+y+z  
    print(sum)
```

```
Alter(10,20,30)  
Alter(20,30)  
Alter(100)
```

Ans 60

70

130

11 Ravi a python programmer is working on a project, for some requirement, he has to define a function with name CalculateInterest(), he defined it as:

```
def CalculateInterest(Principal,Rate=.06,Time):  
    # code
```

But this code is not working, Can you help Ravi to identify the error in the above function and what is the solution.

Ans Yes, here non-default argument is followed by default argument which is wrong as per python's syntax.

Solution:

1) First way is put Rate as last argument as:

```
def CalculateInterest(Principal,Time, Rate=.06):
```

2) Or, give any default value to Time also as:

```
def CalculateInterest(Principal,Rate=.06,Time=12):
```

12 **Call the given function using KEYWORD ARGUMENT with values 100 and 200**

```
def Swap(num1,num2):  
    num1,num2=num2,num1  
    print(num1,num2)
```

```
Swap(_____,_____)
```

Ans Swap(num1=100,num2=200)

13 **Which line number of code(s) will not work and why?**

```
def Interest(P,R,T=7):  
    I = (P*R*T)/100  
    print(I)  
  
Interest(20000,.08,15)           #Line 1  
Interest(T=10,20000,.075)       #Line 2  
Interest(50000,.07)             #Line 3  
Interest(P=10000,R=.06,Time=8)  #Line 4  
Interest(80000,T=10)            #Line 5
```

Ans Line 2 : Keyword argument must not be followed by positional argument  
Line 4 : There is no keyword argument with name „Time“  
Line 5 : Missing value for positional argument „R“

14 **What will be the output of following code?**

```
def Calculate(A,B,C):  
    return A*2, B*2, C*2  
  
val = Calculate(10,12,14)  
print(type(val))  
print(val)
```

Ans <class 'tuple'>  
(20, 24, 28)

15 **What is Local Variable and Global Variables? Illustrate with example**

Ans Local variables are those variables which are declared inside any block like function, loop or condition. They can be accessed only in that block. Even formal argument will also be local variables and they can be accessed inside the function only. Local variables are always indented. Lifetime of local variables is created when we enter in that block and ends when execution of block is over.

Global variables are declared outside all block i.e. without any indent. They can be accessed anywhere in the program and their lifetime is also throughout the program.

Example:

```
count = 1           #Global variable count  
def operate(num1, num2):    # Local variable num1 and num2  
    result = num1 + num2    #Local variable result  
    print(count)  
operate(100,200)  
count+=1  
operate(200,300)
```

16 **What will be the output of following code?**

```
def check():  
    num=50  
    print(num)  
  
num=100  
print(num)  
check()  
print(num)
```

Ans 100  
50  
100

17 **What will be the output of following code?**

```
def check():
    global num
    num=1000
    print(num)
num=100
print(num)
check()
print(num)
```

Ans 100  
1000  
1000

18 **What will be the output of following code?**

```
print("Welcome!")
print("Iam",__name__) #__is double underscore
```

Ans Welcome!  
Iam \_\_main\_\_

19 Function can alter only Mutable data types? (True/False)

Ans True

20 A Function can call another function or itself? (True/False)

Ans True

21 **What will be the output of following code?**

```
def display(s):
    l = len(s)
    m=""
    for i in range(0,l):
        if s[i].isupper():
            m=m+s[i].lower()
        elif s[i].isalpha():
            m=m+s[i].upper()
        elif s[i].isdigit():
            m=m+"$"
        else:
            m=m+"*"
    print(m)
display("EXAM20@cbse.com")
```

Ans exam\$\$\*CBSE\*COM

22 **What will be the output of following code?**

```
def Alter(M,N=50):
    M = M + N
    N = M - N
    print(M,"@",N)
    return M
```

```
A=200
B=100
A = Alter(A,B)
print(A,"#",B)
B = Alter(B)
print(A,"@",B)
```

Ans **300 @ 200**  
**300 # 100**  
**150 @ 100**  
**300 @ 150**

23 **What will be the output of following code?**

```
def Total(Number=10):
    Sum=0
    for C in range(1,Number+1):
        if C%2==0:
            continue
        Sum+=C
    return Sum
```

```
print(Total(4))
print(Total(7))
print(Total())
```

Ans 4  
16  
25

24 **What will be the output of following code?**

```
X = 100
def Change(P=10, Q=25):
    global X
    if P%6==0:
        X+=100
    else:
        X+=50
    Sum=P+Q+X
    print(P,'#',Q,'$',Sum)
```

```
Change()
Change(18,50)
Change(30,100)
```

Ans 10 # 25 \$ 185  
18 # 50 \$ 318  
30 # 100 \$ 480

25 **What will be the output of following code?**

```
a=100
def show():
    global a
    a=200
```

```
def invoke():
    global a
    a=500
show()
invoke()
print(a)
```

Ans 500

26 **What will be the output of following code?**

```
def drawline(char='$',time=5):
    print(char*time)

drawline()
drawline('@',10)
drawline(65)
drawline(chr(65))
```

Ans \$\$\$\$

@@@@@@@@

325

AAAAA

27 **What will be the output of following code?**

```
def Updater(A,B=5):
    A = A // B
    B = A % B
    print(A,'$',B)
    return A + B
```

A=100

B=30

A = Updater(A,B)

print(A,'#',B)

B = Updater(B)

print(A,'#',B)

A = Updater(A)

print(A,'\$',B)

Ans 3 \$ 3

6 # 30

6 \$ 1

6 # 7

1 \$ 1

2 \$ 7

28 **What will be the output of following code?**

```
def Fun1(num1):
    num1*=2
    num1 = Fun2(num1)
    return num1
```

```
def Fun2(num1):  
    num1 = num1 // 2  
    return num1
```

```
n = 120  
n = Fun1(n)  
print(n)
```

Ans 120

29 **What will be the output of following code?**

```
X = 50
```

```
def Alpha(num1):  
    global X  
    num1 += X  
    X += 20  
    num1 = Beta(num1)  
    return num1
```

```
def Beta(num1):  
    global X  
    num1 += X  
    X += 10  
    num1 = Gamma(num1)  
    return num1
```

```
def Gamma(num1):  
    X = 200  
    num1 += X  
    return num1
```

```
num = 100  
num = Alpha(num)  
print(num,X)
```

Ans 420 80

30 **What will be the output of following code?**

```
def Fun1(mylist):  
    for i in range(len(mylist)):  
        if mylist[i]%2==0:  
            mylist[i]/=2  
        else:  
            mylist[i]*=2
```

```
list1 = [21,20,6,7,9,18,100,50,13]  
Fun1(list1)  
print(list1)
```

Ans [42, 10.0, 3.0, 14, 18, 9.0, 50.0, 25.0, 26]