INTERNATIONAL INDIAN SCHOOL BURAIDAH
Worksheet(2) for the Academic Year 2024-25
CLASS:XII   SUBJECT: Computer Science
LESSON :1,2[PYTHON REVISION TOUR]

1   "ComputerScience" is_____literals

Ans. String

2   # symbol can be used in naming an identifier (True/False)

Ans. False

3   Write any 3 data types available in Python

Ans. int, bool,string

4   „**Division by zero**" is an example of_____error.

Ans. Runtime Error

5   **range(0,8)** will return values in the range of_____to _____

Ans. **0 to 7**

6   **randint(1,10)** will return values in the range of_____to _____

Ans. **1 to 10**

8   **Output of :** print("hello"*4 + "Done")

Ans. **hellohellohellohelloDone**

9   **Output of :** print(print("Why?"))

Ans. **Why?**
      None

10   Raj was working on application where he wanted to divide the two number (A and B) , he has written the expression as C = A/B, on execution he entered 30 and 7 and expected answer was 4 i.e. only integer part not in decimal, but the answer was 4.285 approx, help Raj to correct his expression and achieving the desired output.
     Correct Expression : _____

Ans. C = A//B

11   **Can you guess the output?**
        C = -11%4
        print(C)

Ans. **1**

12	Write 2 advantages and disadvantages of Python programming language

Ans.	Advantages
	   1) Easy to Use
	   2) Expressive Language
	Disadvantages
	   1) Slow because of interpreted
	   2) Not strong on type binding

13	**Identify the valid and Invalid identifiers names:** Emp-Code, _bonus, While, SrNo. , for, #count, Emp1, 123Go, Bond007
Ans.	**Valid: _bonus, While, Emp1,Bond007** **Invalid : Emp-code, SrNo., for,#count,123Go**

14	**Identify the type of literals for each:**
	  (i) 123
	  (ii) „Hello"
	  (iii) „Bye\nSee You"
	  (iv) „A"
	  (v) 345.55
	  (vi) 10+4j
	  (vii) 0x12

Ans.	**(i) Int** **(ii) String** **(iii) String** **(iv) String** **(v) Float** **(vi) Complex** **(vii) Int**

15	**What is the size of each string?**
	  (i) „Python"
	  (ii) „Learning@\nCS"
	  (iii) „\table"

Ans.	**(i) 6** **(ii) 12** **(iii) 5**

16	**Output of :**
	  (i) True + True =
	  (ii) 100 + False =
	  (iii) -1 + True =
	  (iv) bool(-1 + True) =

Ans.	**(i) 2** **(ii) 100** **(iii) 0** **(iv) False**

17	**Output of**
	  (i) 2 * 7 = _____
	  (ii) 2 ** 7 = _____
	  (iii) 2**2**3 = _____
	  (iv) 17 % 20 = _____
	  (v) not(20>6) or (19>7) and (20==20) =

Ans.	**(i) 14** **(ii) 128** **(iii) 256** **(iv) 17** **(v) True**

	Output of : a,b,c = 20,40,60
18	b+=10
	c+=b
	print(a,b,c)

Ans. **20 50 110**

| 19 | Write a program to enter 2 number and find sum and product |

```
n1 = int(input('Enter num1 '))
n2 = int(input('Enter num2 '))
s = n1 + n2
p = n1 * n2
print('Sum=',s)
print('Product =',p)
```
(Ans.)

| 20 | Write a program to enter temperature in Fahrenheit and convert it in Celsius |

```
f = int(input('Enter temperature (Fahrenheit) '))
c = (f-32)*5/9
print('Celcus =',c)
```
(Ans.)

| 21 | Write a program to enter any money and find out number of denominations can be used to make that money. For e.g. if the money entered is 2560
Then output should be
2000 = 1
500 = 1
200 = 0
100 =0
50 =1
20 = 0
10 = 1
5 = 0
2 = 0
1 = 0
Hint : use % and // operator (Without Loop / Recursion) |

```
amount = int(input('Enter Amount '))
n2000 = amount//2000
amount = amount % 2000
n500 = amount//500
amount = amount % 500
n200 = amount//200
amount = amount %200
n100 = amount//100
amount = amount %100
n50 = amount//50
amount = amount %50
n20 = amount//20
amount = amount %20
n10 = amount // 10
amount = amount %10
n5 = amount // 5
amount = amount % 5
n2 = amount//2
amount = amount % 2
```
(Ans.)

```
    n1 = amount//1
    amount = amount % 1

    print('2000=',n2000)
    print('500=',n500)
    print('200=',n200)
    print('100=',n100)
    print('50=',n50)
    print('20=',n20)
    print('10=',n10)
    print('5=',n5)
    print('2=',n2)
    print('1=',n1)
```

Consider a list:
MyFamily = ["Father","Mother","Brother","Sister","Jacky"]

22
a)   write statement to print "Brother"
b)   write statement to print all items of list in reverse order
c)   write statement to check "Sister" is in MyFamily or not
d)   write statement to update "Jacky" with "Tiger"
e)   write statement remove "Jacky" from MyFamily and also print it
f)   write statement to add "Tommy" in MyFamily at the end

Ans.
a) print(MyFamily[2])
b) print(MyFamily[::-1])
c) 'Sister' in MyFamily
d) MyFamily[len(MyFamily)-1]='Tiger'   OR
   MyFamily[4]="Tiger"
e) MyFamily.pop()
f) MyFamily.append("Tommy")

Consider a Tuple:
Record = (10,20,30,40)
Raj wants to add new item 50 to tuple, and he has written expression as

23

Record = Record + 50, but the statement is giving an error, Help Raj in writing correct expression.
Correct Expression : _____

Ans. **Record = Record + (50,)**

24   What is the difference between List and Tuple?

Ans. List is mutable type whereas Tuple is Immutable.

25   What is the difference between List and String?

Ans. List is mutable type whereas String is immutable. List can store elements of any type like-string, list, tuple, etc. whereas String can store element of character type only.

26   What is ordered and unordered collection? Give example of each

Ans. Ordered collection stores every elements at index position starts from zero like List, Tuples, string whereas unordered collection stores elements by assigning key to each value not by index like dictionary

27   Consider a Dictionary
     Employee = {"Empno":1,"Name":"Snehil","Salary":80000}

Write statements:
   (i) to print employee name
   (ii) to update the salary from 80000 to 90000
   (iii) to get all the values only from the dictionary

Ans.
```
(i)      print(Employee['Name'])
(ii)     Employee['Salary']=90000
(iii)    print(Employee.values())
```

28
```
Num = 100
Isok = False
print(type(Num))    = _____
print(type(Isok))   = _____
```

Ans.
```
<class 'int'>
<class 'bool'>
```

29 **Name the Python Library module which need to be imported to invoke the following function:**
   a) floor()
   b) randrange()
   c) randint()
   d) sin()

Ans.
  a) math
  b) random
  c) random
  d) math

30 **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)
```

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

31 **Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code:**
```
a=5
work=true
b=hello
c=a+b
FOR i in range(10)
     if i%7=0:
          continue
```

Ans.
a=5
work=True
b='hello'

```
        c = a + b
        for i in range(10):
                if i%7==0:
                        continue
```

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

32

```
for Name in [Ramesh,Suraj,Priya]
    IF Name[0]='S':
        print(Name)
```

Ans.
```
for Name in ["Ramesh","Suraj","Priya"]: if
    Name[0]=='S':
        print(Name)
```

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

33
```
    a=b=10
    c=a+b
    While c=<20:
        print(c,END="*")
        c+=10
```

Ans.
```
a=b=10
c=a+b
while c<=20:
    print(c,end="*")
    c+=10
```

Choose the correct possible answer(s)
```
a = random.randint(1,5)
b = random.randint(1,3)
c = random.randint(2,6)
print(a,b,c)
(i) 2 1 3 (ii) 4 4 4 (iii) 3 2 1 (iv) 5 3 5
```

34

Ans.   **(i)   (iv)**

35 What is type conversion in Python? What are different types of conversion? Illustrate with example.

Ans. Type conversion refers to conversion of one data type to another data type for e.g. string is converted to int. There are 2 types of conversion:

1) **Implicit:** in this of conversion, it is automatically done by the interpreter without user intervention.
Example:
```
Num = [10,20,30]
print(type(Num[1]))        # int
Num[1] = Num[1] + 4.5 # it will automatically convert to float
Print(type(Num[1]))        # float
```
2) **Explicit:** in this type of conversion, user will convert any type of value to its desired type. For example string to int.
Example:
```
num = int(input("Enter number "))
#in the above code input of string type will be converted explicitly
in int.
```

Fill in the blanks to execute infinite loop:
36
```
while_____:
    print("spinning")
```

| Ans. | ```
while True:
    print("spinning")
``` |
| 37 | Write a program to enter any number and check it is divisible by 7 or not |
| Ans. | ```
num  = int(input('Enter any number '))
if num % 7 == 0:
        print('Divisible by 7')
else:
        print('Not divisible by 7')
``` |

Fill in the blanks to execute loop from 10 to 100 and 10 to 1

```
(i)
for i in range(_____):
    print(i)


(ii)
for i in range(_____):
    print(i)
```

| Ans. | **(i)**<br>```
for i in range(10,101):
    print(i)
```<br>**(ii)**<br>```
for i in range(10,0,-1):
    print(i)
``` |

What will be the output if entered number (n)   is 10 and 11

```
i=2
while i<n:
        if num % i==0:
            break
        print(i)
        i=i+1
else:
  print("done")
```

<table>
<tr><td>Ans.</td><td>If n is 10 then when program control enter in loop the if condition will be satisfied and break will execute cause loop to terminate. The else part of while will also be not executed because loop terminated by break. (NO OUTPUT)
If n is 11 it will print 2 to 10 and then it will execute else part of while loop and print „done" because loop terminate normally without break</td></tr>
</table>

What will be the difference in output

```
(i)
for i in range(1,10):
        if i % 4 == 0:
            break
        print(i)
```

```
(ii)

for i in range(1,10):
        if i % 4 == 0:
```

```
        continue
     print(i)
```

What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum values that can be assigned to each of the variables FROM and TO.

41
```
import random
AR=[20,30,40,50,60,70];
FROM=random.randint(1,3)
TO=random.randint(2,4)
for K in range(FROM,TO+1):
     print (AR[K],end="#")
```

(i) 10#40#70#   (ii) 30#40#50#
(iii) 50#60#70#   (iv) 40#50#70#

Ans. Maximum Value of FROM = 3
Maximum Value of TO = 4
Output : (ii)

What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the minimum and maximum value that can be assigned to the variable PICKER.

42
```
import random
PICKER=random.randint(0,3)
COLORS=["BLUE","PINK","GREEN","RED"]
for I in COLORS:
     for J in range(1,PICKER):
          print(I,end="")
     print()
```

```
(i)                              (ii)
BLUE                             BLUE
PINK                             BLUEPINK
GREEN                            BLUEPINKGREEN
RED                              BLUEPINKGREENRED
(iii)                            (iv)
PINK                             BLUEBLUE
PINKGREEN                        PINKPINK
PINKGREENRED                     GREENGREEN
                                 REDRED
```

Ans. Minimum Value of PICKER = 0
Maximum Value of PICKER = 3
Output: (i) and (iv)

43 **What are the correct ways to generate numbers from 0 to 20**

range(20)   (ii) range(0,21)   (iii) range(21)   (iv) range(0,20)

Ans.	**(ii) And (iii)**

Which is the correct form of declaration of dictionary?

44
   (i) Day={1:"monday",2:"tuesday",3:"wednesday"}
   (ii) Day=(1;"monday",2;"tuesday",3;"wednesday")
   (iii) Day=[1:"monday",2:"tuesday",3:"wednesday"]
   (iv) Day={1"monday",2"tuesday",3"wednesday"]

Ans.	**(i)**

Choose the correct declaration from the following code:

45
Info = ({„roll":[1,2,3],"name":[„amit","sumit","rohit"]})
List   (ii) Dictionary   (iii) String   (iv) Tuple

Ans.	**(iv) Tuple**

Which is the valid dictionary declaration?

46
   i)   d1={1:'January',2='February',3:'March'}
   ii) d2=(1:'January',2:'February',3:'March'}
   iii) d3={1:'January',2:'February',3:'March'}
    iv) d4={1:January,2:February,3:March}

Ans.	**(iii)**

What is/are not true about Python"s Dictionary?

47
(i)   Dictionaries are mutable
(ii) Dictionary items can be accessed by their index position
(iii) No two keys of dictionary can be same
(iv) Dictionary keys must be of String data type

Ans.	**(ii) and (iv)**

```
x="abAbcAba"
for w in x:
    if w=="a":
        print("*")
    else:
        print(w)
```

48

Ans.
```
*
b
A
b
c
A
b
*
```

Convert the following „for" loop using „while" loop

49
```
for k in range (10,20,5):
    print(k)
```

Ans.
k = 10
while k<=20:
        print(k)
        k+=5

Give Output

50
```
colors=["violet", "indigo", "blue", "green", "yellow", "orange", "red"]
del colors[4]
```

```
colors.remove("blue")
p=colors.pop(3)
print(p, colors)
```

Ans.	**orange ['violet', 'indigo', 'green', 'red']**

Output of following code:

51
```
A=10
B=15
S=0
while A<=B:
    S = A + B
    A = A + 10
    B = B + 10
    if A>=40:
        A = A + 100
print(S)
```

Ans.	**65**

Output of the following code:

52
```
X = 17
if X>=17:
    X+=10
else:
    X-=10
print(X)
```

Ans.	**27**

How many times loop will execute:

53
```
P=5
Q=35
while P<=Q:
    P+=6
```

Ans.	**6 times**

Find and write the output of the following python code:

54
```
Msg="CompuTer"
Msg1=''
for i in range(0, len(Msg)):
    if Msg[i].isupper():
        Msg1=Msg1+Msg[i].lower()
elif i%2==0:
        Msg1=Msg1+'*'
    else:
        Msg1=Msg1+Msg[i].upper()
print(Msg1)
```

Ans.	**cO*P*t*R**

55
```
A=10
B=10
print( A == B)            = ?
print(id(A) == id(B))     = ?
print(A is B)             = ?
```

Ans.	True True True