FREEDOM INTERNATIONAL SCHOOL
COMPUTER SCIENCE (083)
GRADE XI
RANDOM FUNCTIONS WORKSHEET

1. What possible output(s) will be obtained when the following code is executed?

```
import random
myNumber=random.randint(0,3)
COLOR=["YELLOW","WHITE","BLACK","RED"]
for I in COLOR:
    for J in range(1,myNumber):
        print(I,end="*")
    print()
```

a. RED*
WHITE*
BLACK*
RED*

b. YELLOW*
WHITE*
BLACK*
RED*

c. WHITE*WHITE*
YELLOW*YELLOW*
BLACK*BLACK*
RED*RED*

d. YELLOW*
WHITE*WHITE*
BLACK*BLACK*BLACK*
RED*RED*RED*RED*

2. What will be the output of the following code?

```
import random
List=["Delhi", "Mumbai", "Chennai", "Kolkata"]
for y in range(4):
    x = random.randint(1,3)
    print(List[x],end="#")
```

a. Delhi#Mumbai#Chennai#Kolkata#
b. Mumbai#Chennai#Kolkata#Mumbai#
c. Mumbai# Mumbai #Mumbai # Delhi#
d. Mumbai# Mumbai #Chennai # Mumbai

3. What are the possible output(s) of the following code? Also specify the maximum and minimum values that can be assigned to variable x.

```
import random
m= ['cat', 'bat', 'mat', 'rat', 'sat' , 'pat']
x= random.randint(0,2) +2
for i in range(x+1):
    print(m[i], end=' ')
```

a) bat mat
b) cat bat mat rat
c) cat bat
d) rat sat

4.

(a) What possible output(s) are expected to be displayed on screen at the time of execution of the following program : 1

```
import random
M=[5,10,15,20,25,30]
for i in range(1,3):
    first=random.randint(2,5)- 1
    sec=random.randint(3,6)- 2
    third=random.randint(1,4)
    print(M[first],M[sec],M[third],sep="#")
```

(i) 10#25#15
20#25#25

(ii) 5#25#20
25#20#15

(iii) 30#20#20
20#25#25

(iv) 10#15#25#
15#20#10#

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5. What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code?

```
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="#")
```

a) 10#40#70# b) 30#40#50# c) 50#60#70# d)40#50#70#

b)

6. Study the following program and select the possible output(s) and write maximum and minimum value assigned to the variable y.

```
import random
x=random.random( )
y=random.randint(0,4)
print(int(x),':',y+int(x))
```

(a) 0:0 (b) 1: 6 (c) 2:4 (d) 0:3

7. What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code. Select which option/s is/are correct

```
import random
print(random.randint(15,25) , end=' ')
print((100) + random.randint(15,25) ,
end = ' ' ) print((100) -
random.randint(15,25) , end = ' ' )
print((100) *random.randint(15,25) )
```

(i) 15 122 84 2500 (ii) 21 120 76 1500 (iii) 105 107 105 1800 (iv) 110 105 105 1900

8. What possible outputs are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum value that can be assigned to each of the variables L and U.

```
import random
Arr=[10,30,40,50,70,90,100]
L=random.randrange(1,3)
U=random.randrange(3,6)
for i in range(L,U+1):
    print(Arr[i],"@",end="")
```

(i) 40 @50 @ (ii) 10 @50 @70 @90 @ (iii) 40 @50 @70 @90 @ (iv) 40 @100 @

9. What possible output(s) will be obtained when the following code is executed

```
import random
k=random.randint(1,3)
fruits=['mango', 'banana', 'grapes', 'water melon', 'papaya']
for j in range(k):
    print(fruits[j], end='*')
```

(a) mango*banana*grapes* (b) banana*grapes

(a) banana*grapes*watermelon (d) mango*grapes*papaya

10. Find the correct possible output(s):

```
import random
Guess=65
for I in range(1,5):
    New=Guess+random.randint(0,I)
    print(chr(New),end=' ')
```

a. A B B C b) A C B A c) B C D A d) C A B D

11. Write the possible outputs(s) when this code is executed?

```
import random
n=random.randint(0,3)
color=['Y', 'W' , 'B', 'R']
for i in range (1,n):
    print(color[i], end='*')
    print( )
```

a. R *
W*
B*

b) W*
B*

c) W* W*
B* B*

d) Y*
W* W*
B* B* B*

12. What possible outputs(s) will be obtained when the following code is executed?

```
from random import randint

Vibgyor=[
['V','Violet'],['I','Indigo'],['B','Blue'],['G','Green'],['Y','Ye
llow'],

['O','Orange'],['R','Red'] ]

for i in range(3):

    first=randint(0,1)

    last=randint(1,2)+1

    print(Vibgyor[last-first], end= ':')
```

a. ['G','Green'] : ['G','Green'] : ['Y','Yellow']:
b. ['G','Green'] : ['B','Blue'] : ['G','Green']:
c. ['V','Violet'] : ['B','Blue'] : ['B','Blue']:
d. ['I','Indgo'] : ['B','Blue'] : ['B','Blue']:

13. Find the correct possible output(s):

```
import random
low=25
point =5
for i in range (1,5):
      Number=low + random.randint(0,point)
      print(Number,end=" : ")
      point-=1;
print()
```

i. 29: 26:25 :28 : ii. 29: 26:24 :28 : iii)24: 28:25:26: iv. 29: 26:25:26:

14. Find the correct possible output(s):

```
import random
Area=["NORTH","SOUTH","EAST","WEST"]
for I in range(3):
      ToGo=random.randint(0,1) + 1
      print(Area[ToGo],end=":")
      print()
```

a. SOUTH : EAST : SOUTH : b) NORTH : SOUTH : EAST :

c) SOUTH : EAST : WEST : d) SOUTH : EAST : EAST :