CBSE Paper 2025

1. State True or False : 1

"A Python List must always contain all its elements of same data type."

2. What will be the output of the following statement ? 1

```
print(14%3**2*4)
```

(A) 16 (B) 64

(C) 20 (D) 256

3. Identify the correct output of the following code snippet : 1

```
game="Olympic2024"
print(game.index("C"))
```

(A) `0` (B) `6`

(C) `-1` (D) `ValueError`

4. Which of the following is the correct identifier ? 1

(A) `global` (B) `Break`

(C) `def` (D) `with`

5. Identify the invalid Python statement out of the following options : 1

(A) `print("A",10,end="*")` (B) `print("A",sep="*",10)`

(C) `print("A",10,sep="*")` (D) `print("A"*10)`

5. Identify the invalid Python statement out of the following options : 1

(A) `print("A",10,end="*")` (B) `print("A",sep="*",10)`

(C) `print("A",10,sep="*")` (D) `print("A"*10)`

6. Consider the statements given below and then choose the correct output from the given options : 1

```
L=['TIC', 'TAC']
print(L[::-1])
```

(A) `['CIT', 'CAT']` (B) `['TIC', 'TAC']`

(C) `['CAT', 'CIT']` (D) `['TAC', 'TIC']`

7. Which of the following operator evaluates to **`True`** if the variable on either side of the operator points towards the same memory location and **`False`** otherwise ? 1

(A) **`is`** (B) **`is not`**

(C) **`and`** (D) **`or`**

8. Consider the statements given below and then choose the correct output from the given options : 1

```
D={'S01':95, 'S02':96 }
for I in D :
    print(I,end='#')
```

(A) `S01#S02#` (B) `95#96#`

(C) `S01,95#S02,96#` (D) `S01#95#S02#96#`

10. Consider the statements given below and then choose the correct output from the given options : 1

```
def Change(N):
    N=N+10
    print(N,end='$$')
N=15
Change(N)
print(N)
```

(A) `25$$15` (B) `15$$25`

(C) `25$$25` (D) `2525$$`

11. Consider the statements given below and then choose the correct output from the given options : **1**

```
N='5'
try:
    print('WORD' + N, end='#')
except:
    print('ERROR',end='#')
finally:
    print('OVER')
```

(A) `ERROR#` (B) `WORD5#OVER`

(C) `WORD5#` (D) `ERROR#OVER`

12. Which of the following built-in function/method returns a dictionary ? **1**

(A) `dict()` (B) `keys()`

(C) `values()` (D) `items()`

20. **Assertion (A) :** For a binary file opened using `'rb'` mode, the `pickle.dump()` method will display an error. **1**

Reason (R) : The `pickle.dump()` method is used to read from a binary file.

25. What possible output from the given options is expected to be displayed when the following code is executed ? **2**

```
import random
Cards=["Heart","Spade","Club","Diamond"]
for i in range(2):
    print(Cards[random.randint(1,i+2)],end="#")
```

(A) `Spade#Diamond#` (B) `Spade#Heart#`

(C) `Diamond#Club#` (D) `Heart#Spade#`

31. (a) Predict the output of the following code : **3**

```
def ExamOn(mystr) :
    newstr = ""
    count = 0
    for i in mystr:
        if count%2 != 0:
            newstr = newstr + str(count-1)
        else:
            newstr = newstr + i.lower()
        count += 1
    newstr = newstr + mystr[:2]
    print("The new string is:", newstr)
ExamOn("GenX")
```

OR

(b) Write the output on execution of the following Python code:

```
def Change(X):
    for K,V in X.items():
    L1.append(K)
    L2.append(V)
D={1:"ONE",2:"TWO",3:"THREE"}
L1=[]
L2=[]
Change(D)
print(L1)
print(L2)
print(D)
```

CBSE Paper 2024

1. State True or False : **1**

While defining a function in Python, the positional parameters in the function header must always be written after the default parameters.

3. What will be the output of the following statement : **1**

```
print (16*5/4*2/5-8)
```

(a) `-3.33` (b) `6.0`

(c) `0.0` (d) `-13.33`

4. What possible output from the given options is expected to be displayed when the following Python code is executed ? **1**

```
import random
Signal = ['RED', 'YELLOW', 'GREEN']
for K in range(2, 0, -1) :
    R = random.randrange(K)
    print (Signal[R], end = '#')
```

(a) `YELLOW # RED #` (b) `RED # GREEN #`

(c) `GREEN # RED #` (d) `YELLOW # GREEN #`

7. Identify the invalid Python statement from the following : **1**

(a) `d = dict()` (b) `e = {}`

(c) `f = []` (d) `g = dict{}`

8. Consider the statements given below and then choose the correct output from the given options : **1**

```
myStr="MISSISSIPPI"
print(myStr[:4]+"#"+myStr[-5:])
```

(a) `MISSI#SIPPI` (b) `MISS#SIPPI`

(c) `MISS#IPPIS` (d) `MISSI#IPPIS`

9. Identify the statement from the following which will raise an error : **1**

(a) `print("A"*3)` (b) `print(5*3)`

(c) `print("15" + 3)` (d) `print("15" + "13")`

10. Select the correct output of the following code : **1**

```
event="G20 Presidency@2023"
L=event.split(' ')
print(L[::-2])
```

(a) `'G20'` (b) `['Presidency@2023']`

(c) `['G20']` (d) `'Presidency@2023'`

12. Observe the given Python code carefully : **1**

```
a=20
def convert(a):
    b=20
    a=a+b

convert(10)
print(a)
```

Select the correct output from the given options :

(a) 10 (b) 20

(c) 30 (d) Error

13. State whether the following statement is True or False : **1**

While handling exceptions in Python, name of the exception has to be compulsorily added with `except` clause.

v

16. Consider the following Python statement : **1**

```
F=open('CONTENT.TXT')
```

Which of the following is an invalid statement in Python ?

(a) `F.seek(1,0)` (b) `F.seek(0,1)`

(c) `F.seek(0,-1)` (d) `F.seek(0,2)`

17. **Assertion (A)** : CSV file is a human readable text file where each line has a number of fields, separated by comma or some other delimiter. **1**

Reason (R) : `writerow()` method is used to write a single row in a CSV file.

18. **Assertion (A)** : The expression `"HELLO".sort()` in Python will give an error. **1**

Reason (R) : `sort()` does not exist as a method/function for strings in Python.

22. Write the output displayed on execution of the following Python code : **2**

```
LS=["HIMALAYA", "NILGIRI", "ALASKA", "ALPS"]
D={}
for S in LS :
    if len(S)%4 == 0:
        D[S] = len(S)
for K in D :
    print(K,D[K], sep = "#")
```

25. Predict the output of the following code : **2**

```
def callon(b=20,a=10):
    b=b+a
    a=b-a
    print(b,"#",a)
    return b
x=100
y=200
x=callon(x,y)
print(x,"@",y)
y=callon(y)
print(x,"@",y)
```

26. Write the output on execution of the following Python code : **3**

```
S="Racecar Car Radar"
L=S.split()
for W in L :
    x=W.upper()
    if x==x[::-1]:
        for I in x:
            print(I,end="*")
    else:
        for I in W:
            print(I,end="#")
    print()
```

CBSE Paper 2023

5. Select the correct output of the code : **1**

```
S= "Amrit Mahotsav @ 75"
A=S.partition (" ")
print (a)
```

(a) `( 'Amrit Mahotsav','@','75')`
(b) `['Amrit','Mahotsav','@','75']`
(c) `('Amrit', 'Mahotsav @ 75')`
(d) `('Amrit', '', 'Mahotsav @ 75')`

21. (a) Given is a Python list declaration : **1**

```
Listofnames=["Aman","Ankit","Ashish","Rajan","Rajat"]
```

Write the output of :

```
print (Listofnames [-1:-4:-1])
```

(b) Consider the following tuple declaration : **1**

```
tup1=(10,20,30,(10,20,30),40)
```

Write the output of :

```
print(tupl.index(20))
```

24. (a) Write the output of the code given below : **2**

```
def short_sub (lst,n) :
    for i in range (0,n) :
        if len (lst)>4:
            lst [i]=lst [i]+lst[i]
        else:
            lst[i]=lst[i]
subject=['CS','HINDI','PHYSICS','CHEMISTRY','MATHS']
short_sub(subject,5)
print(subject)
```

OR

(b) Write the output of the code given below : **2**

```
a =30
def call (x) :
      global a
      if a%2==0:
           x+=a
      else:
           x-=a
      return x
x=20
print(call(35),end="#")
print(call(40),end= "@")
```

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

```
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#
```

2

CBSE Paper 2021

24. Evaluate the following Python expressions : *2*

(a) `2 * 3 + 4 ** 2 – 5 // 2`

(b) `6 < 12 and not (20 > 15) or (10 > 5)`

29. What possible output(s) is/are expected to be displayed on the screen at the time of execution of the program from the following code ? Also specify the maximum and minimum value that can be assigned to the variable R when K is assigned value as 2. *2*

```
import random
Signal = [ 'Stop', 'Wait', 'Go' ]
for K in range(2, 0, -1):
   R = randrange(K)
   print (Signal[R], end = ' # ')
```

(a) `Stop # Wait # Go #`

(b) `Wait # Stop #`

(c) `Go # Wait #`

(d) `Go # Stop #`

33. Write the output for the execution of the following Python code : *2*

```
def change(A):
  S=0
  for i in range(len(A)//2):
      S+=(A[i]*2)
  return S
B = [10,11,12,30,32,34,35,38,40,2]
C = Change(B)
Print('Output is',C)
```

CBSE Paper 2020

(e) Find and write the output of the following Python code : 2

```
def ChangeVal(M,N):
    for i in range(N):
        if M[i]%5 == 0:
            M[i] //= 5
        if M[i]%3 == 0:
            M[i] //= 3
L=[25,8,75,12]
ChangeVal(L,4)
for i in L :
    print(i, end='#')
```

(f) Find and write the output of the following Python code : 3

```
def Call(P=40,Q=20):
    P=P+Q
    Q=P-Q
    print(P,'@',Q)
    return P
R=200
S=100
R=Call(R,S)
print (R,'@',S)
S=Call(S)
print(R,'@',S)
```

(g) What possible output(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 values that can be assigned to the variable End. *2*

```
import random

Colours = ["VIOLET","INDIGO","BLUE","GREEN",
           "YELLOW","ORANGE","RED"]

End = randrange(2)+3
Begin = randrange(End)+1
for i in range(Begin,End):
    print(Colours[i],end="&")
```

(i) `INDIGO&BLUE&GREEN&`	(ii) `VIOLET&INDIGO&BLUE&`
(iii) `BLUE&GREEN&YELLOW&`	(iv) `GREEN&YELLOW&ORANGE&`

(d) Write the output of the following Python code : *1*

```
for i in range(2,7,2):
   print(i * '$')
```

(e) Write the output of the following Python code : *1*

```
def Update(X=10):
   X += 15
   print('X = ', X)

X=20
Update()
print('X = ', X)
```

CBSE Paper 2019

(d) Find and write the output of the following python code : 2

```
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
```

14

(e) Find and write the output of the following python code : 3

```
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
```

(f) What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following code ? Also specify the minimum values that can be assigned to each of the variables BEGIN and LAST. *2*

```
import random

VALUES=[10,20,30,40,50,60,70,80]
BEGIN=random.randint(1,3)
LAST=random.randint(BEGIN,4)

for I in range(BEGIN,LAST+1):
  print VALUES[I],"-",
```

(i) 30 - 40 - 50 -	(ii) 10 - 20 - 30 - 40 -
(iii) 30 - 40 - 50 - 60 -	(iv) 30 - 40 - 50 - 60 - 70 -

CBSE Paper 2018

(d) Find and write the output of the following Python code : *2*

```
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
```

(e) Find and write the output of the following Python code : 3

```
class GRAPH:
    def __init__(self,A=50,B=100):
        self.P1=A
        self.P2=B
    def Up(self,B):
        self.P2 = self.P2 - B
    def Down(self,B):
        self.P2 = self.P2 + 2*B
    def Left(self,A):
        self.P1 = self.P1 - A
    def Right(self,A):
        self.P1 = self.P1 + 2*A
    def Target(self):
        print "(",self.P1.":",self.P2,")"
G1=GRAPH(200,150)
G2=GRAPH()
G3=GRAPH(100)
G1.Left(10)
G2.Up(25)
G3.Down(75)
G1.Up(30)
G3.Right(15)
G1.Target()
G2.Target()
G3.Target()
```

(f) What possible output(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 BEGIN and LAST. *2*

```
import random
POINTS=[20,40,10,30,15];
POINTS=[30,50,20,40,45];

BEGIN=random.randint(1,3)
LAST=random.randint(2,4)
for C in range(BEGIN,LAST+1):
  print POINTS[C],"#",
```

(i) 20#50#30#	(ii) 20#40#45#
(iii) 50#20#40#	(iv) 30#50#20#

CBSE Paper 2017

(d) Find and write the output of the following Python code : **2**

```
STR = ["90","10","30","40"]
COUNT = 3
SUM = 0
for I in [1,2,5,4]:
    S = STR[COUNT]
    SUM = float (S)+I
    print SUM
    COUNT-=1
```

(e) Find and write the output of the following Python code : **3**

```
class ITEM:
    def_init_(self,I=101,N="Pen",Q=10): #constructor
        self.Ino=I
        self.IName=N
        self.Qty=int(Q);
    def Buy(self,Q):
        self.Qty = self.Qty + Q
    def Sell(self,Q):
        self.Qty -= Q
    def ShowStock(self):
        print self.Ino,":",self.IName,"#",self.Qty

I1=ITEM()
I2=ITEM(100,"Eraser",100)
I3=ITEM(102,"Sharpener")
I1.Buy(10)
I2.Sell(25)
I3.Buy(75)
I3.ShowStock()
I1.ShowStock()
I2.ShowStock()
```

(f) What are the possible outcome(s) executed from the following code ? Also specify the maximum and minimum values that can be assigned to variable N. **2**

```
import random
SIDES=["EAST","WEST","NORTH","SOUTH"];
N=random.randint(1,3)
OUT=""
for I in range(N,1,-1):
    OUT=OUT+SIDES[I]
print OUT
```

(i) **SOUTHNORTH**	(ii) **SOUTHNORTHWEST**
(iii) **SOUTH**	(iv) **EASTWESTNORTH**

CBSE Paper 2016

(d) Find and write the output of the following python code : **2**

```
Numbers = [9,18,27,36]
for Num in Numbers:
    for N in range(1, Num%8):
        print(N,"#",end="")
    print()
```

(e) Find and write the output of the following python code : **3**

```
class Notes:
    def __init__(self,N=100,Nt="CBSE"): #constructor
        self.Nno=N
        self.NName=Nt
    def Allocate(self,N,Nt):
        self.Nno= self.Nno + N
        self.NName= Nt + self.Nname
    def Show(self):
        print(self.Nno,"#",self.NName)
s=Notes()
t=Notes(200)
u=Notes(300,"Made Easy")
s.Show()
t.Show()
u.Show()
s.Allocate(4,"Made")
t.Allocate(10,"Easy")
u.Allocate(25,"Made Easy")
s.Show()
t.Show()
u.Show()
```

(f) What are the possible outcome(s) executed from the following code ? Also specify the maximum and minimum values that can be assigned to variable PICKER. **2**

```
import random
PICK=random.randint(0,3)
CITY=["DELHI","MUMBAI","CHENNAI","KOLKATA"];
for I in CITY:
    for J in range(1,PICK):
        print(I,end="")
    print()
```

(i)	(ii)
DELHIDELHI MUMBAIMUMBAI CHENNAICHENNAI KOLKATAKOLKATA	DELHI DELHIMUMBAI DELHIMUMBAICHENNAI
(iii)	**(iv)**
DELHI MUMBAI CHENNAI KOLKATA	DELHI MUMBAIMUMBAI KOLKATAKOLKATAKOLKATA

(b) What will be the output of the following python code considering the following set of inputs ? **2**

```
JAYA
My 3 books
PICK2
2120
```

Also, explain the try and except used in the code.

```
Counter=0
while True:
    try :
        Number=int(raw_input("Give a Number"))
        break
    except ValueError:
        Counter=Counter+2
        print("Re-enter Number")
print(Counter)
# For later versions of python, raw_input
# should be considered as input
```

CBSE Paper 2015

(d) Find and write the output of the following python code : **2**

```
for Name in ['Jayes', 'Ramya', 'Taruna', 'Suraj']:
    print Name
    if Name[0]== 'T':
        break
else :
    print 'Finished!'
print 'Got it!'
```

(e) Find and write the output of the following python code : **3**

```
class Worker :
    def_init_(self,id,name) :    #constructor
        self.ID=id
        self.NAME=name
    def Change(self):
        self.ID=self.ID+10
        self.NAME='Harish'
    def Display(self,ROW):
        print self.ID,self.NAME,ROW
w=Worker(55,'Fardeen')
w.Display(1)
w.Change()
w.Display(2)
print w.ID+len(w.NAME)
```

(f) What are the possible outcome(s) executed from the following code ? Also specify the maximum and minimum values that can be assigned to variable NUMBER. **2**

```
STRING="CBSEONLINE"
NUMBER=random.randint(0,3)
N=9
while STRING[N]!='L':
    print STRING[N]+STRING[NUMBER]+'#',
    NUMBER=NUMBER+1
    N=N-1
```

(i) ES#NE#IO# (ii) LE#NO#ON# (iii) NS#IE#LO# (iv) EC#NB#IS#

(b) What will be the output of the following python code ? Explain the try and except used in the code. **2**

```
U=0
V=6
print 'First'
try:
    print 'Second'
    M=V/U
    print 'Third',M
    except ZeroDivisionError :
        print V*3
        print 'Fourth'
    except:
        print V*4
        print 'Fifth'
```