

Type A : Short Answer Questions/Conceptual Questions

1. What are tokens in Python? How many types of tokens are allowed in Python? Exemplify your answer.
2. How are keywords different from identifiers?
3. What are literals in Python? How many types of literals are allowed in Python?
4. Can nongraphic characters be used and processed in Python? How? Give examples to support your answer.
5. Out of the following, find those identifiers, which cannot be used for naming Variables or Functions in a Python program :
 Price*Qty, class, For, do,
 4thCol, totally, Row31, _Amount
6. How are floating constants represented in Python? Give examples to support your answer.
7. How are string-literals represented and implemented in Python?
8. What are operators? What is their function? Give examples of some unary and binary operators.
9. What is an expression and a statement?
10. What all components can a Python program contain?
11. What are variables? How are they important for a program?
12. Describe the concepts of block and body. What is indentation and how is it related to block and body?
13. What are data types? How are they important?
14. How many integer types are supported by Python? Name them.
15. What are immutable and mutable types? List immutable and mutable types of Python.
16. What is the difference between implicit type conversion and explicit type conversion?
17. An immutable data type is one that cannot change after being created. Give three reasons to use immutable data.
18. What is entry controlled loop? Which loop is entry controlled loop in Python?
19. Explain the use of the pass statement. Illustrate it with an example.
20. Below are seven segments of code, each with a part coloured. Indicate the data type of each coloured part by choosing the correct type of data from the following type.

[CBSE D 2016]

(a) int (b) float (c) bool (d) str (e) function (f) list of int (g) list of str

```
(i) if temp < 32 :
    print("Freezing")

(ii) L = ['Hiya', 'Zoya', 'Preet']
    print(L[1])

(iii) M = [ ]
    for i in range (3) :
        M . append(i)
        print(M)

(iv) L = ['Hiya', 'Zoya', 'Preet']
    n = len (L)
    if 'Donald' in L[1 : n] :
        print(L)
```

```
(v) if n % 2 == 0 :
    print("Freezing")

(vi) L = inputline.split()
    while L != ( ) :
        print(L)
        L = L[1 : ]

(vii) L = ['Hiya', 'Zoya', 'Preet']
    print(L[0] + L[1])
```

it converts the read line into words

Type B : Application Based Questions

1. Fill in the missing lines of code in the following code. The code reads in a limit amount and a list of prices and prints the largest price that is less than the limit. You can assume that all prices and the limit are positive numbers. When a price 0 is entered the program terminates and prints the largest price that is less than the limit.

```
#Read the limit
limit = float(input("Enter the limit"))
max_price = 0
# Read the next price
next_price = float(input("Enter a price or 0 to stop:"))
while next_price > 0 :
    <write your code here>
    #Read the next price
    <write your code here>
if max_price > 0:
    <write your code here>
else :
    <write your code here>
```

2. Predict the outputs of the following programs :

(a) `count = 0`
`while count < 10:`
`print('Hello')`
`count += 1`

(b) `x = 10`
`y = 0`
`while x > y:`
`print(x, y)`
`x = x - 1`
`y = y + 1`

(c) `keepgoing = True`
`x = 100`
`while keepgoing:`
`print(x)`
`x = x - 10`
`if x < 50:`
`keepgoing = False`

(d) `x = 45`
`while x < 50:`
`print(x)`

(e) `for x in [1,2,3,4,5]:`
`print(x)`

(f) `for p in range(1,10):`
`print(p)`

(g) `for z in range(-500,500,100):`
`print(z)`

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

(i) `c = 0`
`for x in range(10):`
`for y in range(5):`
`c += 1`
`print(c)`

(j) `x = [1,2,3]`
`counter = 0`
`while counter < len(x):`
`print(x[counter] * '%')`
`for y in x:`
`print(y * ' ')`
`counter += 1`

(k) `for x in 'lamp':`
`print(str.upper(x))`

```
(i) x = 'one'
    y = 'two'
    counter = 0
    while counter < len(x):
        print(x[counter], y[counter])
        counter += 1
```

```
(ii) x = "apple, pear, peach"
     y = x.split(", ")
     for z in y:
         print(z)
```

```
(iii) x = 'apple, pear, peach, grapefruit'
      y = x.split(',')
      for z in y:
          if z < 'm':
              print(str.lower(z))
          else:
              print(str.upper(z))
```

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

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

[C OSE 13 2015]

4. How many times will the following for loop execute and what's the output ?

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

```
(ii) for i in range(1,3,1):
      for j in range(i+1):
          print('*')
```

5. Is the loop in the code below infinite ? How do you know (for sure) before you run it ?

```
m = 3
n = 5
while n < 10:
    m = n - 1
    n = 2 * n - m
    print(n, m)
```

Type C : Programming Practice/Knowledge based Questions

1. Write a program to print one of the words negative, zero, or positive, according to whether variable x is less than zero, zero, or greater than zero, respectively.
2. Write a program that returns True if the input number is an even number, False otherwise.
3. Write a Python program that calculates and prints the number of seconds in a year.
4. Write a Python program that accepts two integers from the user and prints a message saying if first number is divisible by second number or if it is not.
5. Write a program that asks the user the day number in a year in the range 2 to 365 and asks the first day of the year - Sunday or Monday or Tuesday etc. Then the program should display the day on the day-number that has been input.