

CONDITIONAL AND LOOPING CONSTRUCTS

ASSIGNMENTS

1. What is the use of range() function in python?
2. else clause is available with if as well as loop construct, can you differentiate the use of else in both.
3. What is empty statement?
4. What is determinable and non determinable loop in python?
5. What are jump statements in python?
6. What is entry control loop?
7. What is named condition?
8. What is the output of the following program?

```
x = ['dc', 'ba']  
for i in x:  
    i.upper()  
print(x)
```
9. What is the output of the following program?

```
x = 321  
for i in x:  
    print(i)
```
10. What is the output of the following program?

```
for i in [4, 3, 2, 1][::-1]:  
    print (i)
```

11. What is the output of the following program?
- ```
numbers = [6, 5, 3, 8, 4, 2, 5, 4, 11]
sum = 0
for val in numbers:
 sum = sum+val
print("The sum is", sum)
```
12. What is the output of the following?
- ```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)
```
13. What is the output of the following?
- ```
i = 0
while i < 3:
 print(i)
 i += 1
else:
 print(0)
```
14. What is the output of the following?
- ```
x = "abcdef"
i = "i"
while i in x:
    print(i, end=" ")
```

15. What is the output of the following?

```
x = "abcdef"
```

```
i = "a"
```

```
while i in x:
```

```
    x = x[:-1]
```

```
    print(i, end = " ")
```

16. What is the output of the following?

```
x = 123
```

```
for i in x:
```

```
    print(i)
```

17. What is the output of the following?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for i in d:
```

```
    print(i)
```

18. What is the output of the following?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x in d.keys():
```

```
    print(d[x])
```

19. What is the output of the following?

```
x = 2
```

```
for i in range(x):
```

```
    x += 1
```

```
    print (x)
```

20. Rewrite following program using for loop

```
t = 115
while t > 112:
    print(t)
    t=t-1
```

21. Rewrite following program using for loop

```
i = 4
while i < 9:
    print(i)
    i = i+2
```

22. Rewrite following program using for loop

```
no=3456
while no>0 :
    print(no%10)
    no=no/10
```

23. Rewrite following code fragment using while loop

(a)

```
for i in range(5):
    print(i)
```

(b)

```
for num in range(2, 10):
```

```
    if num % 2 == 0:
```

```
        print("Found an even number", num)
```

```
        continue
```

```
    print("Found a number", num)
```

(c)

```
for x in range(10):
```

```
    if x % 2 == 0:
```

```
        continue
```

```
    print(x)
```

24. Take 10 integers from keyboard using loop and print their average value on the screen.

25. Print the following patterns using loop :

```
*
```

```
***
```

```
*****
```

```
***
```

```
*
```

26. Write a program to calculate factorial of a number.

27. Calculate the sum of digits of a number given by user.

E.g.-

INPUT : 123 OUTPUT : 6

INPUT : 12345 OUTPUT : 15

28. Write a program to print all prime number in between 1 to 100.

29. Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included).

30. Suppose you need to print a pattern like this

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

Write python program for it.

31. How many times will the following code print "Welcome to Python"?

```
count = 0
```

```
while count < 10:
```

```
    print("Welcome to Python")
```

```
    count += 1
```

32. What is the output of the following code?

```
x = 0
while x < 4:
    x = x + 1
print("x is", x)
```

33. Write a Python program to construct the following pattern, using a nested for loop.

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*

```

34. Write a Python program to create the multiplication table (from 1 to 10) of a number.