

SHIVAJI COLLEGE, UNIVERSITY OF DELHI
DEPARTMENT OF COMPUTER SCIENCE
INTERNAL TEST (Academic Year 2023-24)

Name of the Course	: GE-1	Semester	: I
Name of the Paper	: Programming With Python	Faculty Name	: Abha Vasal
Duration	: 1 Hour	Maximum Marks:	20
Date of Test	: 25.10.2023		

SET A

1 Write a for loop corresponding to the while loop given (2)

Sum = 0

I = 1

while I < 40:

 Sum = Sum + I

 I = I + 4

print(Sum)

2. What is the output of following

i. $25 + 6 // 3 ** 3 != 9 // 3 - 3$ and $29 >= 27 // 9$ (6)

ii. $17 // 3 * 5 ** 2 + 3 * 7$

iii N=3

Sum=0

for i in range(1,N):

 for j in range(i, N):

 Sum= Sum + i+j

print(Sum)

iv b = 10

a *= b + 5 What will be the final value of variable a if initial value is 2

v math.ceil(16.33)

3. Write an assignment statement using single conditional expression (2)

if cuet_marks >= 600 :

 Remarks='good'

else:

 Remarks='average'

4. Write a program to print the pattern (4)

1

12

123

1234

12345 (ask user to input number of lines and print pattern accordingly)

5. Which of the following are valid identifiers? If they are invalid, then mention the cause of violation.

a) #ofElements b) no of var c) 55marks d) answer (2)

6. Write Python program to find the LCM of two positive numbers. (4)

Abha Vasal

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SET B

1 Write a for corresponding to the while loop given (2)

Sum =0

I =25

while I >0:

Sum = Sum + I

I = I- 6

print(Sum)

2. What is the output of following

i. 6 % 10 +1 4 -24 * 5 // 5

ii.. 2 + 3 ** 2 // 4 % 3

iii a = "32 * 76" what will be the value stored in a

iv a = 'hello' * 5

v. a = 'string' > 'Strings' what will be the value stored in a

v math.floor(12.33)

3. Write an assignment statement using single conditional expression (2)

if age >=18:

Status='major'

else:

Status='minor'

4. Write a program to print the pattern (4)

1

12

123

1234

12345 (ask user to input number of lines and print pattern accordingly)

5. Which of the following are valid identifiers? If they are invalid, then mention the cause of violation.

a) no-Of-Elements b) for c) In d)valid_var (2)

6. Write a python program to print the following series using loops:

0 1 1 2 3 5 8 13 21....

(4)



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SET C

1. Write python programme to find greatest common divisor of two numbers input by user. (4)
2. What will be the output of the following (5)

- a) `math.floor(67.33)`
- b) `-6 * 21 + 8 / 16 * 3 + 60`
- c) `Sum=0`
`N=5`
`while N >0:`
`if N % 2 ==0:`
`Sum= Sum + N*2`
`N =N-1`
`print(sum)`
- d) `sum=0`
`for a in range(5):`
`sum +=a**2`
`print(sum)`
- e) `"python" *3 >"Hello" -5`

3. How many times and for what values of iterable variables will the following loops execute (4)

- | | |
|---|---|
| a) <code>for I in range(5):</code>
<code> print(I)</code> | c) <code>for I in range(15,3,-2):</code>
<code> print(I)</code> |
| b) <code>for I in range(10,5, 1):</code>
<code> print(I)</code> | d) <code>for j in range(1,1):</code>
<code> print((j))</code> |

4. Write python program to Print the pattern (4)

A
BB
CCC

DDDD (Ask user to enter number of lines. Check whether n is positive according print pattern)

5. Show output and stepwise execution (3)

```
N=3
M=2
Sum=0
For i in range(N, 1,-1):
    For j in range( M, 1,-1):
        Sum= Sum + i + j
    print(Sum)
```


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SET D

1. Write python program to check if input number is a prime number also check if the number is a positive quantity (5)
2. What will be the output of following (6)
 - a)

```
N=5
Sum=0
for i in range(1,N):
    for j in range( N, i, -1):
        Sum= Sum + i + j
print(Sum)
```
 - b) "Python" > "python"*2
 - c) $12 + 6 * 2 ** 3 != 9 // 3 - 3$ and $27 >= 28 / 9$
 - d) $13 // 3 * 4 ** 2 - 12$
 - e)

```
S=5
while S < 0 :
    print(s)
    S= S-1
```
 - f)

```
for i in range(10,20):
    if (i%4 !=0):
        continue
    print (i)
```
3. Write a program to find reverse of a number entered as input by the user. Also check if the number entered is an even number. (4)
4. Rewrite the program using for loop (2)

```
total=0
count=1
while count<5:
    total+=count
    count+=1
print (total)
```
5. Explain break and continue statements and when do we use it ? Give example (3)


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SET E

1. What is an assert statement? Why is it used? Write a program that accepts input as length and breadth from user and compute the area of triangle, also check that the sum of the length of any two sides is greater than the third side. (4)
2. Explain break and continue statements and when do we use it ? Give example (3)
3. What will be the output of the following code: (2)

```
i = 1
while True:
    if i%2 == 0:
        break
    print( i )
    i += 2
```

4. Write a python program to find factorial of a positive integer entered by the user (4)
5. What will be the output of following. Show step by step evaluations (5)

- `math.ceil(65.65)`
- `3 ** 4 // 3 + 5 > 9` or `4 != 9`
- `sum=0`
for `i in range(1, 3):`
 for `j in range(1,3):`
 `sum += i*2 +j`
 `print("sum is ", sum)`
- `sum=0`
for `a in range(4):`
 `sum +=a**2`
 `print(sum)`
- `"hi!" > 'hi'` or `25 > 24/3`

6. Write an assignment statement using single conditional expression (2)

```
if age >=18:
    Status='major'
else:
    Status='minor'
```



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