2019 December Programming in Python Exam

- **Name:**
- **Student No:**

1 Question: Variable names - 10 points

Write a two line python code that creates two variables that contains your name and your student number.

2 Question: Simple output 1 - 10 points

What is the output of the following code?

```
name="atilla"
age=42
print(name+age)
```

3 Question: Simple output 2 - 10 points

What is the output of the following code?

```
for i in range(1,6):
    print("*"*i)
```

4 Question: Simple Function - 10 points

Write a python function that calculates product of its two inputs. For example: if a = 5 and b=4 then this function should return 20.

5 Question: Simple Function that return multiple outputs - 10 points

Write a python function that calculates product,summation and difference of its two inputs. For example, a = 5 and b=4 then this function should return (20,9,1).

6 Question: 1..N Summation - 10 points

Write a python code that gets an input number N from user and finds summation 1..N only divisible by 3 numbers. For example, N = 10, then summation is 3+6+9 = 18.

7 Question: 3-7-21 - 10 points

Write a program that prints the numbers from 1 to 100. But for multiples of three print "three" instead of the number and for the multiples of seven print "seven". For numbers which are multiples of both three and seven print "twenty-one".

8 Question: Random Passwords - 10 point

Please write a function that creates a random password for a user. Password length should be a parameter for this function and should be 12. Use that function to create random passwords for 1000 users. Following code snippets are useful for this question.

```
import string
print(string.ascii_uppercase)
Out: 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
import random as rnd
print(rnd.randint(1,10))
Out: 7
```

9 Question: Stars - 20 point

Please write a python code so that you will see following output, a Rhombus, on the screen. Length for this shape, always odd number, should be given by user. Below rhombus has a length 9.

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