Name: Daniel Thommana Python ASSGN 1

1.A number is a Disarium number if the sum of the digits raised to the power of its respective position in the original number is equal to that number itself. Which of the following is the Disarium number ?

Ans:

```
num = int(input())
rem = s = 0;
length = len(str(num))

n = num;

while(num > 0):
    rem = num%10;
    s += int(rem**length);
    num = num//10;
    length -= 1;


if(s == n):
    print( "disarium number");
else:
    print(" not a disarium number")
```

```
89
disarium number
```

```
175
disarium number
```

```
123
not a disarium number
```

```
131
not a disarium number
```

2. Right now the time is 3:00 PM, if you will add 70 more hours, what would be the time then?

Ans:

```
time= "3 PM"
var=int(time[:2])
print("Old time:",time)

if time[-2:] == "PM":
  var= int(time[:2]) + 12


new_var= (var+70)%24



if new_var >12:
  new_time=str(new_var - 12) + " " + "PM"
  print("New time:",new_time)
else:
  new_time=str(new_var) + " " + "AM"
  print("New time:",new_time)
```

```
Old time: 3 PM
New time: 1 PM
```

3. A cricket player's statistics in the last 10 games are :__

Runs Scored : 23 , 56, 67, 9, 56*, 90, 41, 40, 104, 3

Balls Played : 45, 46, 90, 4, 44, 71, 70, 34, 81, 7

What is the average number of runs scored by the player in the last 10 games ?

What is the strike rate of a player in the last 10 games?

Ans:

```
runs =[23 , 56, 67, 9, 56, 90, 41, 40, 104, 3]

balls_played=[45, 46, 90, 4, 44, 71, 70, 34, 81, 7]
total_runs=sum(runs)
total_balls_played=sum(balls_played)
avg_runs=total_runs/len(runs)
print("Avg run is",avg_runs)
overall_strike_rate=((total_runs * 100) / total_balls_played)
print("Strike rate is",overall_strike_rate)
```

```
Avg run is 48.9
Strike rate is 99.39024390243902
```

4. What is the value of the expression 100 / 25

Ans: 4.0

5. What is the output of (1.1 + 2.2 == 3.3) ?

Ans: False

6. Create a variable x with the value 10. Increase the value of x tenfold using an augmented assignment operator?

Ans:

```
x=10
x *= 10
print(x)
```

```
100
```

7.Which of the following are valid Python variable names ?

Ans: Age, Upi_id, Upi66, Return

8.What is the value of Temperature 101.5 degree Celsius into degree Fahrenheit ?

Ans:

```
Celsius = float(input("Enter Temperature in degree Celsius: "))
Fahrenheit=(Celsius * 9/5) + 32
print( "Temperature in degree Fahrenheit:",Fahrenheit,"°F")
```

```
Enter Temperature in degree Celsius: 101.5
Temperature in degree Fahrenheit: 214.7 °F
```

9.What will be the value for x after executing the following code :-

```
x = 0
a = 0
b = -5
if a > 0:
    if b < 0:
        x = x + 5
    elif a > 5:
        x = x + 4
    else:
        x = x + 3
else:
    x = x + 2
```

Ans : 2

10. What will be the value of the following code :-

```
print( not ( not a == 10 or not b == 10) )
```

Ans: False (Based on previous values of a and b)

If we don't consider previous values of a and b then we get **error**

```
As a and b is not defined
```

11. What does the following code print out?

```
print("123" + "abc")
```

Ans: 123abc

12. Which of these operators is not a comparison / logical operator?

Ans: =

13. What is true about the following code segment:

```
if  x == 5 :
   print('Is 5')
   print('Is Still 5')
   print('Third 5')
```

Ans: Depending on the value of x, either all three of the print statements will execute or none of the statements will execute

14. For the following code,

```
if x < 2 :

   print('Below 2')

elif x >= 2 :

    print('Two or more')

else :

   print('Something else')
```

What value of 'x' will cause 'Something else' to print out?

Ans: This code will never print 'Something else' regardless of the value for 'x'

15.

There are 100 doors in a row, all doors are initially closed. A person walks through all doors multiple times and toggles (if open then close, if close then open) them in the following way:

In the first walk, the person toggles every door

In the second walk, the person toggles every second door, i.e., 2nd, 4th, 6th, 8th, …

In the third walk, the person toggles every third door, i.e. 3rd, 6th, 9th, …

……

…….

In the 100th walk, the person toggles the 100th door.

What will be the position of door number 53 after this entire process ?

Ans: Closed

Those which have ODD number of factors end up being OPEN and those which have EVEN number of factors end up as CLOSED.

All perfect squares will remain OPEN.

```
perfect_squares_list=[]
l=1
r=100
for i in range(l, r + 1):

        # If current element is a perfect square
        if (i**(.5) == int(i**(.5))):
            perfect_squares_list.append(i)
print("perfect_squares:",perfect_squares_list)
num=int(input())
if (num in perfect_squares_list):
   print ("Open")
else:
    print ("Closed")
```

```
perfect_squares: [1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
53
Closed
```