FINAL PYTHON SCRIPT:

```
import ibmiotf.application
import ibmiotf.device
import time
import random
import sys
from twilio.rest import Client
import keys
Client = Client(keys.account_sid, keys.auth_token)

organization = "67vtdy"
deviceType = "ESP8266"
deviceId = "PRO"
authMethod = "token"
authToken = "lavanya@02"



pH = random.randint(1, 14)
turbidity = random.randint(1, 1000)
temperature = random.randint(0, 100)
```

```
def myCommandCallback(cmd):
    print("Command Received: %s" % cmd.data['command'])
    print(cmd)



try:
    deviceOptions = {"org": organization, "type": deviceType,
"id": deviceId, "auth-method": authMethod,
                    "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)


except Exception as e:
    print("caught exception connecting device: %s" % str(e))
    sys.exit()


deviceCli.connect()


while True:


    pH = random.randint(1, 14)
    turbidity = random.randint(1, 1000)
```

```
    temperature = random.randint(0, 100)

    data = {'pH': pH, 'turbid': turbidity, 'temp': temperature}
    def SMS():
        message = Client.messages.create(
            body="ALERT!! THE WATER QUALITY IS DEGRADED",
            from_=keys.twilio_number,
             to = keys.target_number)
        print(message.body)

    if temperature>70 or pH<6 or turbidity>500:
        SMS()

    def myOnPublishCallback():
        print("Published pH= %s" % pH, "Turbidity:%s" %
turbidity, "Temperature:%s" % temperature)



    success = deviceCli.publishEvent("demo", "json", data,
qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not Connected to ibmiot")
```

```
    time.sleep(5)
    deviceCli.commandCallback = myCommandCallback


deviceCli.disconnect()
```