

# Offline Assessment Test -1

February 22, 2019

## 0.1 Offline Assessment Test -1

**This is an offline test, for whom the answers need to be written on paper. Duration: 90minutes**

**Q1:** Looking at the below code, write down the final values of A0, A1, ...An.

```
A0 = dict(zip(('a','b','c','d','e'),[1,2,3,4,5]))
A1 = xrange(10)
A2 = sorted([i for i in A1 if i in A0])
A3 = sorted([A0[s] for s in A0])
A4 = [i for i in A1 if i in A3]
A5 = {i:i*i for i in A1}
A6 = [[i,i*i] for i in A1]
```

**Q2:** Write a program to display the below pattern

**input:** (4,7)

**output:**

```
0 0 0 0 0 0 0
0 1 1 1 1 1 0
0 1 1 1 1 1 0
0 0 0 0 0 0 0
```

**Q3:** write a program to display the below pattern:

**Input:** 10

**Output:**

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

**Q4:** Write a program to display the below pattern (Floyd's Triangle):

```
1
2 3
4 5 6
7 8 9 10
```

**Q5:** Write a program which takes the below Input and returns the corresponding output, without using calendar module:

---

**Input:** 31 Jan 2019

**Output:** It is 31st day of the year 2019

---

**Input:** 22 Feb 2019

**Output:** It is 53rd day of the year 2019

---

**Input:** 1 Mar 2019

**Output:** It is 61st day of the year 2019

---

**HINT:** 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 0th

**Q6:** If the user enters 5 10-digit mobile numbers in either of the below three formats,

```
07895462130
919875641230
+9195969878
```

process it and display them in the sorted order.

```
+91 78954 62130
+91 91959 69878
+91 98756 41230
```

**HINT:** +91 XXXXX XXXXX is the typical format of 10-digit mobile number