SHORT TEST APRIL 2019
Informatics Practice (XII C,D)

MM: 20                                                                                              TIME:1 HRS

Q.1  a)  What is the difference between pivot() and pivot_table() functions in         2
         pandas.

     b)  For the given DataFrame df, what will be the output of the statement          2
         P = p=df.pivot(index='House', columns='Year', values='Points')

| | House | Year | Points |
|---|---|---|---|
| 0 | Raman | 2010 | 500 |
| 1 | Tagore | 2010 | 600 |
| 2 | Raman | 2011 | 300 |
| 3 | Tagore | 2011 | 400 |
| 4 | Ashok | 2010 | 500 |

     c)  For the given DatafFrame what will be the output of the following             2
         statement:

| | rollno | name | physics | chem |
|---|---|---|---|---|
| 0 | 101 | Pat | 90 | 75 |
| 1 | 101 | Sid | 40 | 80 |
| 2 | 103 | Tom | 50 | 60 |
| 3 | 102 | Kim | 90 | 85 |
| 4 | 104 | Ray | 65 | 60 |

         df_desc = df.sort_values('physics', ascending=False)

     d)  What is the difference between Median and Mode in descriptive statistics?     1

     e)  What is variance in statistics? What will be the output of the given python   3
         code?
         import pandas as apd
         s = pd.Series([4,2,6,3,9])
         v = s.var()

     f)  What is the use of describe() method in a DataFrame? Name any four            2
         parameters that are projected when we call describe() method on a
         DataFrame containing numeric values.

g)  For the given python code what will be the output                    2

df = pd.DataFrame([[1, 2, 3], [4, 5, 6], [7, 8, 9]],columns=['A', 'B', 'C'])
df.agg("mean", axis="columns")

Q.2  a)  What is the difference between transform() and applymap() functions in     3
pandas? Write a python statement using either transform or applymap so
that the content in each cell of the given DataFrame is reduced to half.

| | Rupees | Dollar | Pound |
|---|---|---|---|
| 0 | 100 | 50 | 30 |
| 1 | 120 | 60 | 40 |
| 2 | 140 | 70 | 50 |
| 3 | 160 | 80 | 60 |
| 4 | 180 | 90 | 70 |

b)  What is the need for he pipe() method in pandas? Write a pipe statement     3
to combine the following statements.
p= df.groupby('Hobby')
k = p.get_group('Dance')
m = k['score'].agg('max')