1.

ii.

```
node 1: {'dc': 0.026501766784452298, 'cs': 0.3497065183812172, 'nbc': 0.008347578685386587, 'pr': 0.002245005694685942, 'auth': 0.0039765651520972355}
node 50: {'dc': 0.022968197879858657, 'cs': 0.3543035993740219, 'nbc': 0.0038980095170968805, 'pr': 0.0018929372095642385, 'auth': 0.0039572350640384 1}
node 100: {'dc': 0.002650176678445 2294, 'cs': 0.2654784240150094, 'nbc': 7.142902633244772e-05, 'pr': 0.00038548565319589323, 'auth': 0.0001726877364994 1732}

Process finished with exit code 0
```

iv.

```
The node who gets the single step voucher: 105

Process finished with exit code 0
```

vi.

```
The node who gets the multiple step voucher: 23

Process finished with exit code 0
```

viii.

```
The node who gets the multiple steps diminished voucher: 23

Process finished with exit code 0
```

No, there is not difference compare with section **V**.

The number of steps and the rate are not matter, even when we change dramatically the parameters it will be no change.

Because, Closeness centrality calculate the reciprocal of the sum of the length of the shortest paths between the node and all other nodes in the graph.

x.

```
The most valuable node: 333

Process finished with exit code 0
```