Course: Data Structure (IT2101) Quiz: 1 Total marks: 20

1. The daily flight of an airline company appears in following figure. CITY lists the cities, and ORIG[K] and DEST[K] denote the cities of the origin and destinations respectively, of the flight NUMBER[K]. Draw the corresponding directed graph of the data. 5

	CITY
1	Atlanta
2	Boston
3	Chicago
4	Miami
5	Philadelphia

(a)

	NUMBER	ORIG	DEST
1	701	2	3
2	702	3	2
3	705	5	3
4	708	3	4
5	711	2	5
6	712	5	2
7	713	5	1
8	715	1	4
9	717	5	4
10	718	4	5

(b)

2. What is the complexity of an algorithm? 3
3. Consider an algorithm which finds the minimum number among n numbers. If the complexity function is C(n): 6

i) Describe and find C(n) for the worst case
ii) Describe and find C(n) for the best case
iii) Find C(n) for the average case when n=3

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m ← a[1];
For i ← 2 to size of input;
        if m > a[i] then m ← a[i];
output m.
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4. Consider the following array representation. Calculate the address of A[1][2] (base address is 100). 6