



CSE408

TSP

Lecture # 36

Traveling Salesman Problem



- For each city i , $1 \leq i \leq n$, find the sum s_i of the distances from city i to the two nearest cities; compute the sums of these n numbers, divide the result by 2, and, if all the distances are integers, round up the result to the nearest integer:

Traveling Salesman Problem



$$lb = \lceil s/2 \rceil.$$

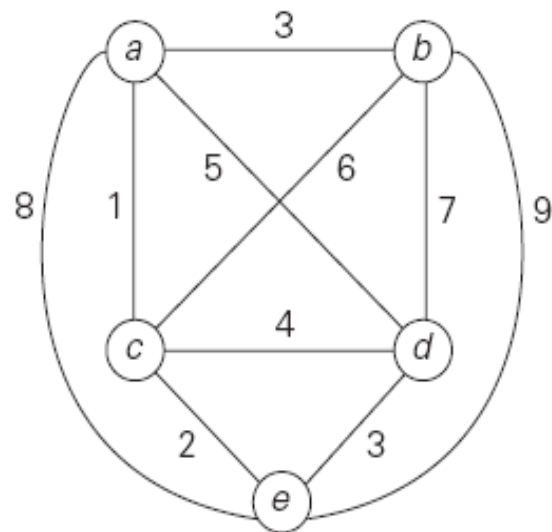
$$lb = \lceil [(1 + 3) + (3 + 6) + (1 + 2) + (3 + 4) + (2 + 3)]/2 \rceil = 14.$$

Edge(a,d) and (d,a)

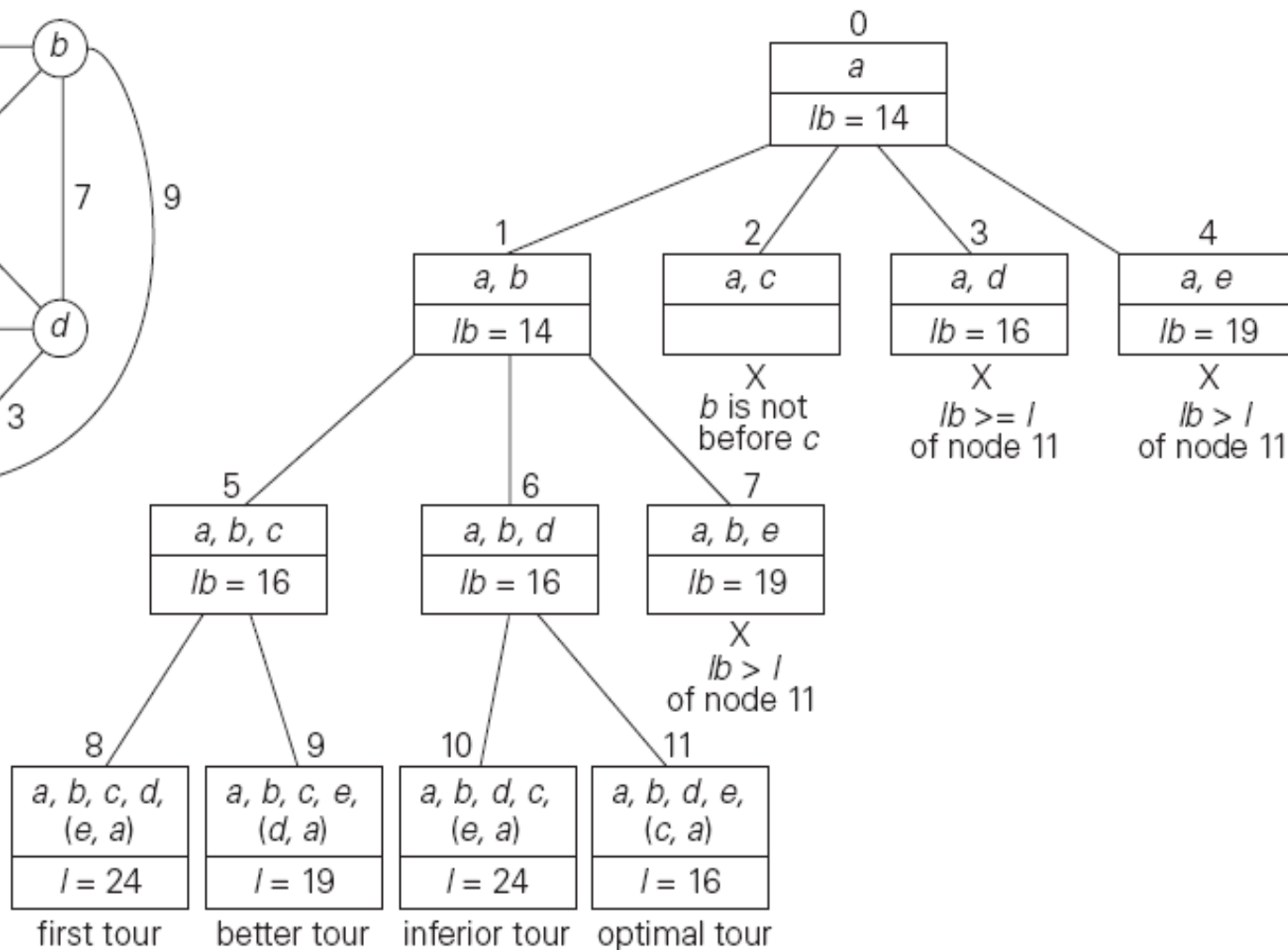


$$\lceil [(1 + 5) + (3 + 6) + (1 + 2) + (3 + 5) + (2 + 3)] / 2 \rceil = 16.$$

Example



(a)



(b)



Thank You !!!