

## Facultad de Ingeniería en Electricidad y Computación

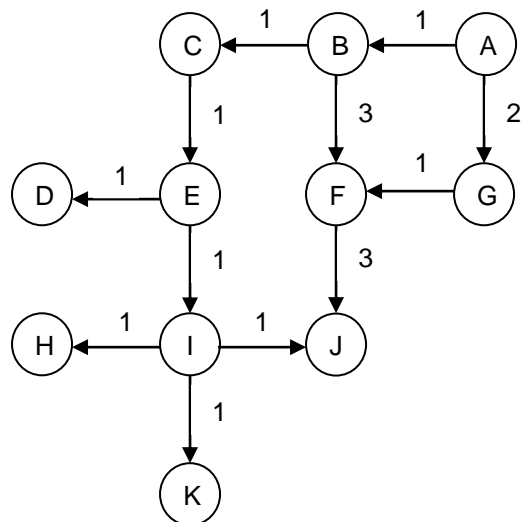
### Artificial Intelligence

#### Homework # 2. Heuristic Search Mechanisms:

**Work as a group** and answer each of the following questions. You must report only one document as a group, and place it in SIDWeb 4.0, section "Trabajos".

**DO NOT** send the homework via email.

1. The "Best First" search algorithm utilize a CLOSE list to detect loops:
  - a) What would be the effect of eliminating this list and use the  $g(n)$  instead (the  $g$  component of the heuristic function  $f$ )?
  - b) (5 points) Compare the efficiency of the two methods in terms of time and memory used.
2. Consider the following graph, where nodes are labelled alphabetically and links have associated costs. As a group discuss and answer the following questions?



List the nodes in the open and close lists for every iteration while searching for  $J$  from  $B$ , using best first search. Use the costs in the links as  $g(n)$ , and assume that the distance to the goal is the minimum skip distance; that is,  $h(n)$  is the minimum number of links between a node and the goal.