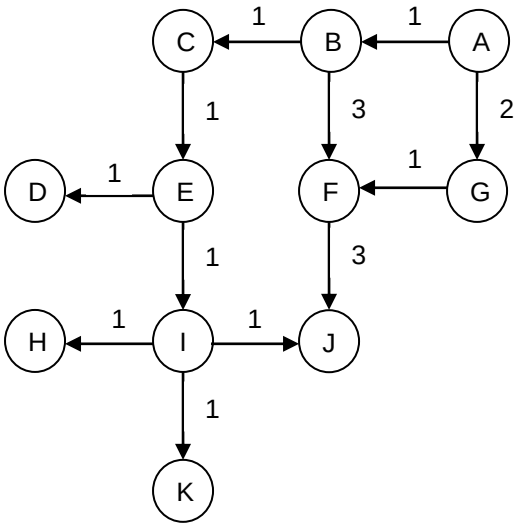
Facultad de Ingeniería en Electricidad y Computación
Artificial Intelligence

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) Consider the following graph, where nodes are labelled alphabetically and links have associated costs. As a group discuss and answer the following questions?



a) List the nodes in the order they would be visited when performing depth first search for *K*, starting from *A*. Assume that neighbors of the same node are visited in alphabetical order.

b) List the same list for breath first search for *K*, starting from *A*.

c) 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.

2) What changes would you make to the BEST – FIRST algorithm, to convert it to a Hill Climbing algorithm, Write the algorithm and explain the changes.