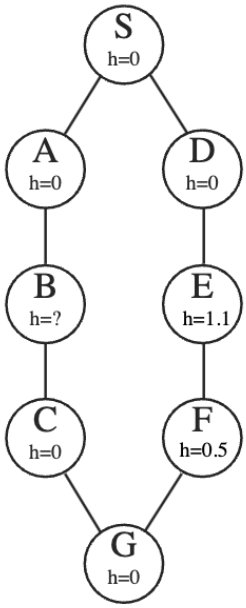
BRAC University
Department of Computer Science and Engineering

CSE 422: Artificial Intelligence (C)

Quiz 01: Spring 2025 Time: 30 Minutes Marks: 10

Name		ID		Section	



1. All edges in the graph have cost 1. suppose that $h(F) = 0.5, h(E) = 1.1$, and all other heuristic values except $h(B)$ are fixed to zero (as shown on the right). For each of the following parts, indicate the range of values for $h(B)$ that yield an admissible heuristic AND result in the given expansion ordering when using A* graph search. If the given ordering is impossible with an admissible heuristic, write none. Break ties alphabetically. You may assume that h is nonnegative.

   (a) B expanded before E expanded before F

   (b) E expanded before B expanded before F

   Your answer should be a range, e.g. $x \leq h(B) < y$. You may assume that h is nonnegative.

(a) $0.0 \leq h(B) \leq 1.1$

(b) $1.1 < h(B) \leq 1.5$