CM 2602 – Artificial Intelligence
Tutorial 04

1. What is the reason why "Uniform cost search" is called so? Explain with an example toy graph.

2. What is "Dept Limited Search"? How can it be considered as an extension to the "Depth First Search"?

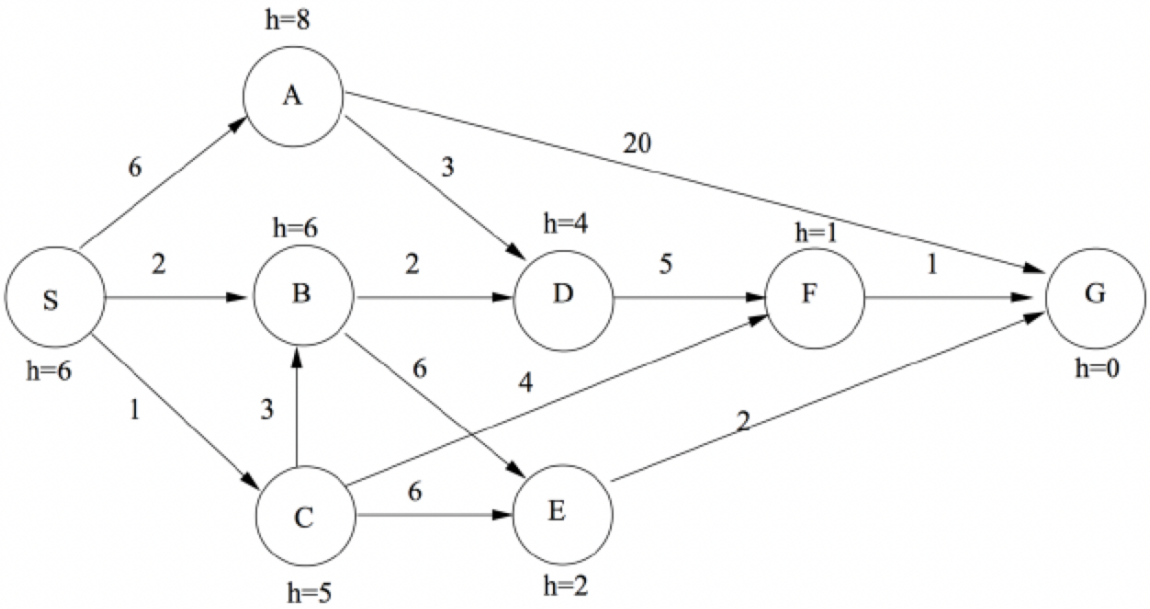
3. How does "Iterative Deepening DFS" work? Someone says it is a combination of both BFS and DFS" Provide justifications to this statement.

4. How does "informed search" differ from "uninformed search"? Why can we consider "informed search" is more efficient compared to the "uninformed search"?

5. What do you mean by a heuristic cost function? Give example heuristic cost functions that can be used for 2D space.

6. What are the two types of informed search algorithms that we discussed in the class? List down few similarities and differences between those informed search algorithms.

7. Execute Greedy Search and A* search for the following graph individually. Output the traversal order for each algorithm and make sure mention your steps clearly.



VL - 0,3,1, 4,2

8. Use the “SearchAlgorithms.ipynb” to implement different search algorithms for the below graph. Consider 0 as the start node and 6 as the goal node. Mention the final traversal path for each algorithm. If you assume 1min as the cost traveling form one node to the other, which algorithm takes min and max time for the traversal.