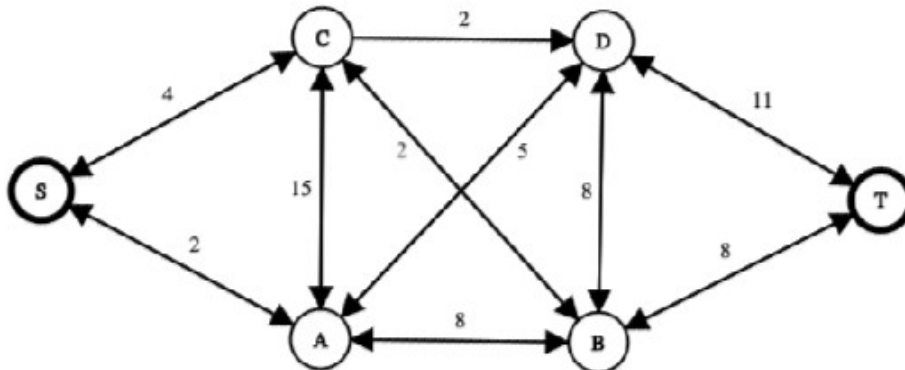


UCS1504 - Artificial Intelligence Lab

Department of CSE, SSN College of Engineering

3. Informed Search Strategies – A* Search

06.09.2022



Consider the search space depicted above for a hypothetical search problem. S is the initial state and T is the goal state. The cost of each edge has been labeled on the graph.

- a) Consider the following table representing $h(s)$ for each state s in the space. What path does A* search find using this $h(s)$, and what is its cost?

State s	A	B	C	D
$h(s)$	10	16	9	9

- b) Compute the shortest path and its cost using uniform cost search (Dijkstra's algorithm) [un-informed search strategy]
- c) Compare your results for (a) and (b). If they are the same, explain why. If they are different

Content to be written in Observation for output verification:

- i. **Solve the problem manually** at the back side of your AI class Note

ii. Date

iii. Ex. No

iv. Title

v. Aim v. Data structure used (with justification)

vi. Logic applied or Algorithm (short description)

vii. Sample input and output