CMPG313 – Theory Assignment 2 – 16 March 2024

Question 1 (Campus Navigation)

Formulate a search problem for a new student who needs to find the quickest route from the main entrance to the various departments on campus.
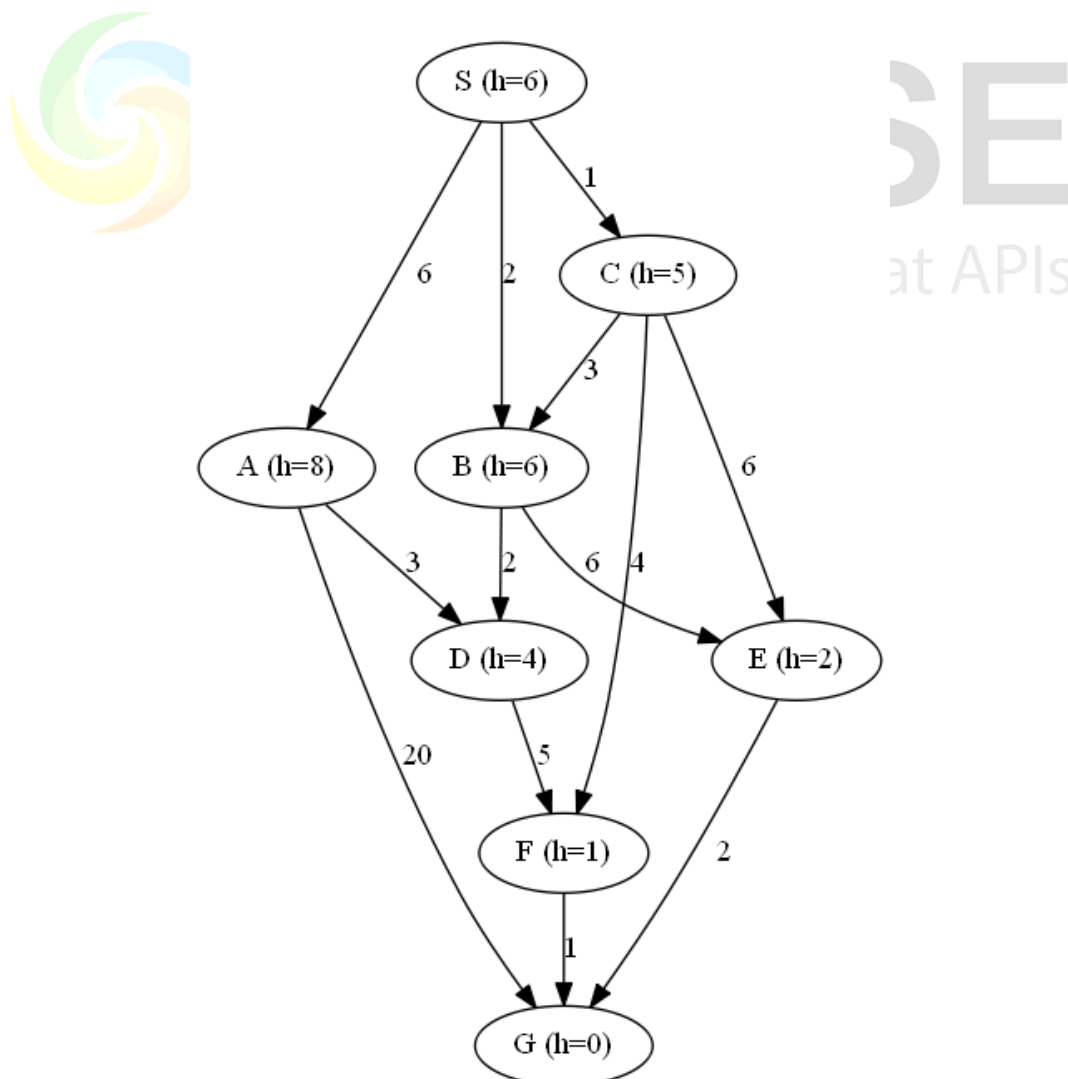   [6]

Question 2 (Event Planning)

Devise a search problem for planning and scheduling campus events in a semester without conflicts.   [6]

Question 3 (Library Book Retrieval)

Formulate a search problem for finding and retrieving a set of books from different sections of the university library.   [6]

Question 4 (Solving Problems by Searching)

Consider the next search problem with start state S and goal state G. The action costs are on the branches (edges), and the heuristic values are next to the state names.

Perform a uniform-cost search and show all the iterations and steps clearly.
[20]

Total: [38]