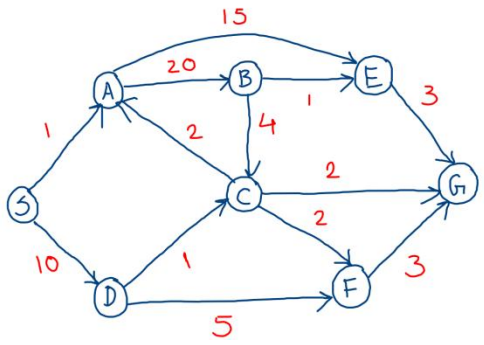
Assignment 2

Last date of completion: 15/02/2021

1. The following state graph has been provided for a problem (S->Start node, G->Goal node):



   You need to solve the problem using BFS, DFS, iterative Deepening, and uniform cost search strategies. You should report the following for each search strategy:
   a. Demonstrate step-wise execution of the search strategy
   b. The number of nodes generated and expanded
   c. Solution path with path cost

2. Write a program (C/Python) to solve the following problem using BFS, DFS, iterative Deepening, and uniform cost search strategies. You should report the following for each search strategy:
   a. Demonstrate step-wise execution of the search strategy
   b. The number of states/nodes generated and expanded
   c. The plan of actions with path cost

   In this problem, three missionaries and three cannibals must cross a river with minimum cost using a boat which can carry at most two people, under the constraint that, for both banks, that the missionaries present on the bank cannot be outnumbered by cannibals. The boat will charge Rs 10 for missionaries and Rs 20 for cannibals.