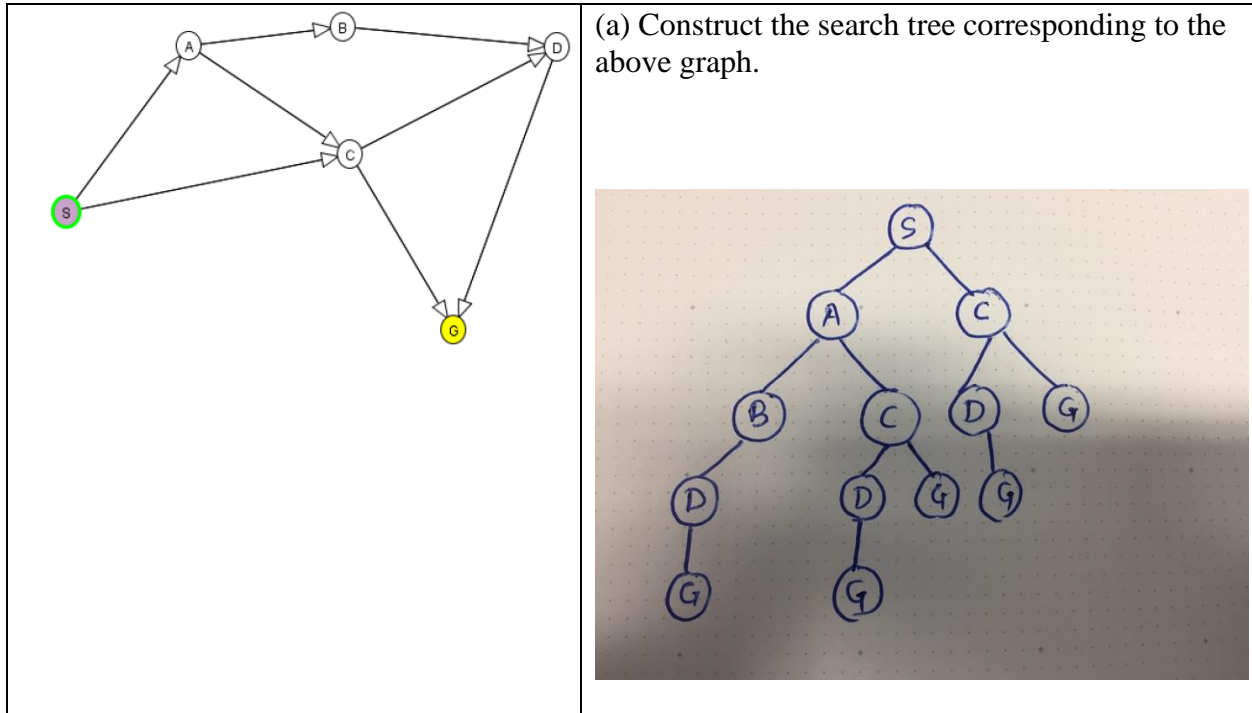


**CPSC 322 - Solution**  
**BFS and DFS**

**Question 1.** Consider the problem of finding the shortest path from the start node S to the goal node G in the following graph. Answer the following questions.



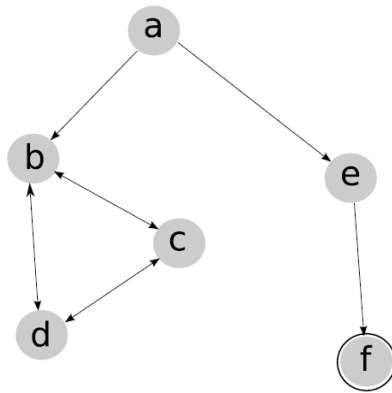
(b) Which nodes are expanded by the BFS search algorithm?

**SACBCDG**

(c) Which nodes are expanded by the DFS search algorithm?

**SABDG**

**Question 2.** Consider the search problem represented in below figure, where a is the start node and f is the goal node. Would you prefer DFS or BFS for this problem? Why?



BFS as DFS might get stuck in a loop