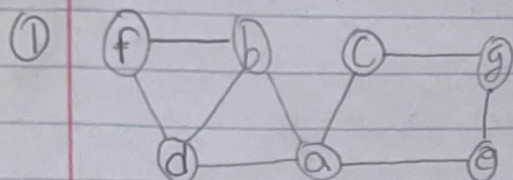


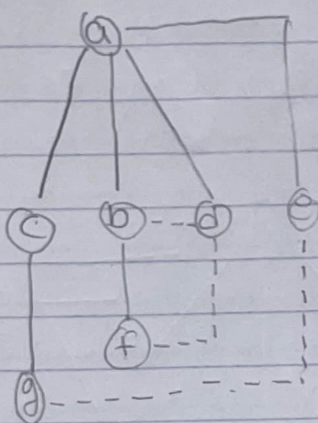


## Homework #3A



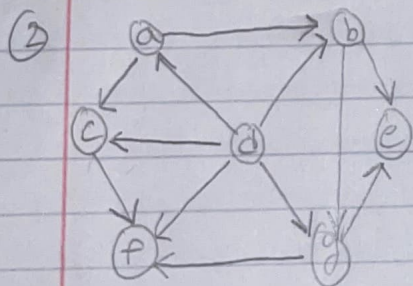
Traversal Queue:  $a_1, b_2, c_3, d_4, e_5, f_6, g_7$

BFS Forest:



Tree edges = 6

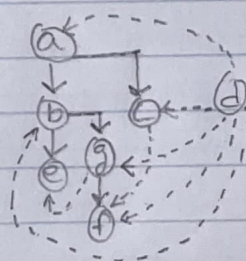
Back edges = 3



Traversal Stack

$f_{5,2}$   
 $e_{3,1} \quad g_{4,3}$   
 $b_{2,4} \quad c_{6,5}$   
 $a_{1,6} \quad d_{7,7}$

DFS Forest

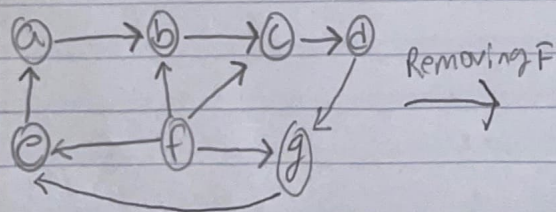


Tree edges = 5

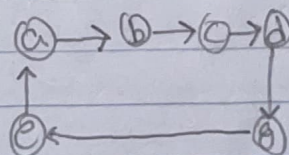
Back edges = 7

Push-in Order:  $a, b, e, g, f, c, d$   
Popped-off Order:  $e, f, g, b, c, a, d$   
Sorting List:  $d, a, c, b, g, f, e$

③



Removing F



There is no source vertex, so topological solution is not possible.