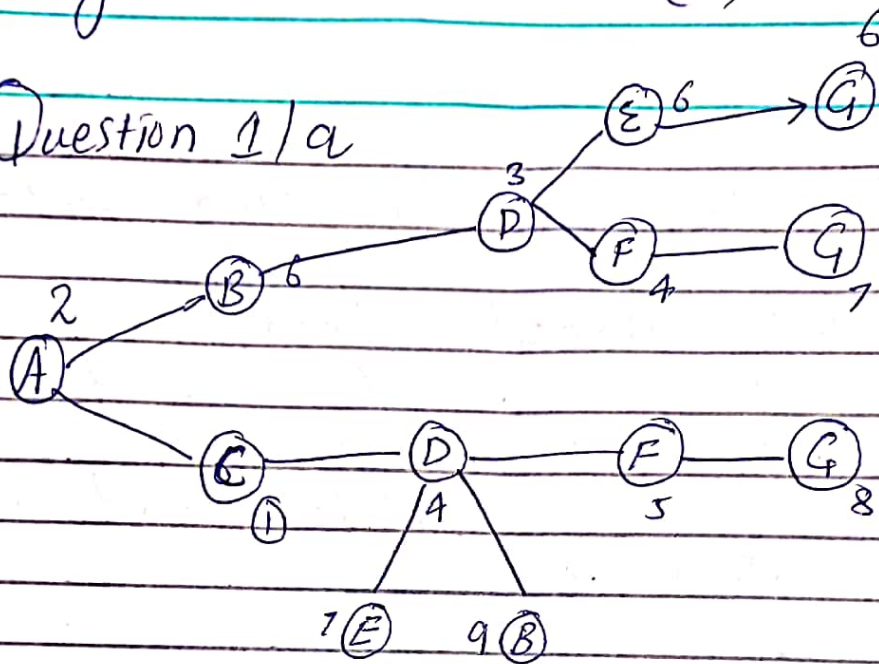


19L-1196

# Assignment #2 Section (6H)

Question 1/a



visited nodes

A : 2  
 C : 1  
 D : 4  
 F : 5  
 B : 6  
 D : 3  
 F : 4  
 G : 6

Question 1/b order

$A \rightarrow B \rightarrow D \rightarrow E \rightarrow G$

Question 1/c

E	B	
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### Question 1d

it would be  $A \rightarrow G \rightarrow D \rightarrow E \rightarrow G$   
total 7.

Since D has already been visited  
by  $A \rightarrow C \rightarrow D$  so it would  
not explore  $A \rightarrow B \rightarrow D$ .

Hence it is not complete and not  
optimal solution too.

### Question 1/e

it would have found  $A C D F G$ .  
Hence not optimal and ~~can~~ not  
complete too.

### Question 1/f

since  $g(n) - g(n+1) \not\leq 0$

e.g.  
Therefore it  $g(B) - g(D) = 4$   
is not consistent.



## Question 2

DFS  
G1

BFS  
G2

UCS  
G3

A\*  
G2

## Question 3

$$h_1 < g(A \rightarrow G)$$

$$h_2 < g(A \rightarrow G)$$

$$h_3 < g(A \rightarrow G)$$

$$h_4 < g(A \rightarrow G)$$

$$h_1 + h_2 + \dots + h_4 < 4g(A \rightarrow G)$$

$$\frac{h_1 + h_2 + h_3 + h_4}{4} < g(A \rightarrow G)$$

Proved.

Ques 3/b UCS

Q 3/c UCS

## Question 4

a)  $\geq 5$

b) false

c) 1, 2

d) D, E, F (3)