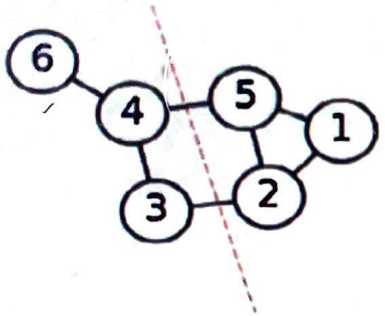
Question 1

Calculate the normalized cut



Selected Answer: 9/10

Question 2

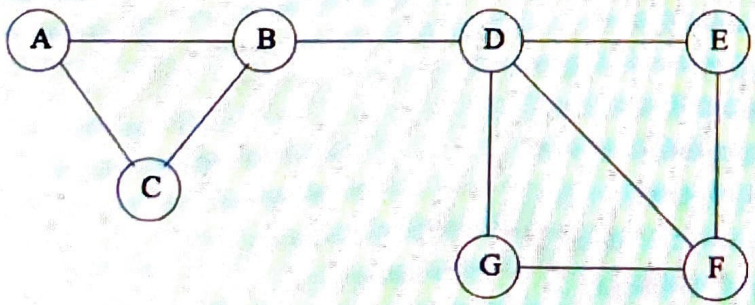
Select all of the true statements

Selected Answers: In the Girvan Newman algorithm, each DAG edge must be part of a shortest path from root node.

A high betweenness score suggests that an edge runs between two different communities.

Question 3

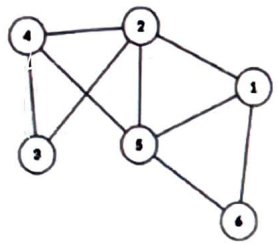
Use the Girvan-Newman algorithm to perform the credit calculation starting from node G. What is the final credit assigned to G?



Selected Answer: 7

Question 4

For the given graph, we want to generate the adjacency matrix & degree matrix & laplacian matrix



	1	2	3	4	5	6
1						
2						
3	A	B		C		
4				D		
5					E	
6					F	

1. For the adjacency matrix, please fill in the blanks: (2 pts):

A = **[A]** , B = **[B]**

2. For the degree matrix, please fill in the blanks: (2 pts):

C = **[C]** , D= **[D]**

3. For the laplacian matrix, please fill in the blanks: (2 pts):

E = **[E]** , F = **[F]**

Specified Answer for: A	0
Specified Answer for: B	1
Specified Answer for: C	0
Specified Answer for: D	3
Specified Answer for: E	4
Specified Answer for: F	-1