

Q1:

'c', 'c-c', 'c-c-c', 'c-c-c-c' are frequent

Q2:

(1):

Step1:

$\text{Rank}(u_0)=1/3$

$\text{Rank}(u_1)=2/4$

$\text{Rank}(u_2)=1/4$

$\text{Rank}(u_3)=2/2$

$\text{Rank}(u_4)=2/2$

$\text{Rank}(u_5)=1/2$

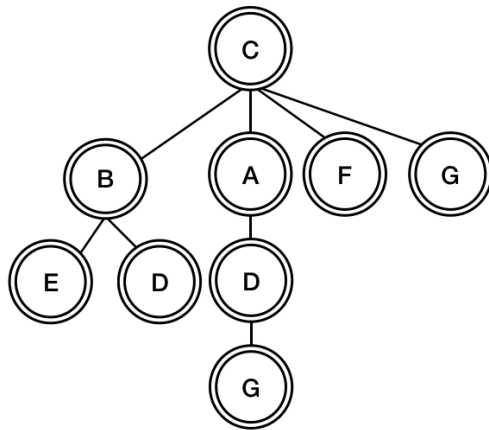
$\text{Rank}(u_6)=2/1$

$\text{Rank}(u_7)=3/1$

$\text{Rank}(u_8)=3/1$

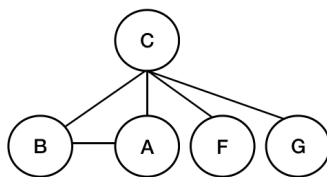
Hence, u_2 is selected as the root node.

Step2:

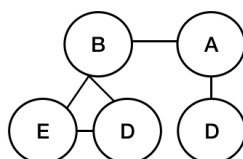


(2):

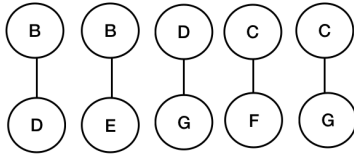
core-set:



forest-set:



leaf-set:



Q3:

Choose v_3 as activated seed can generate largest influence spreads.

$w(v_3)=1$, $w(v_2)=0.4$, $w(v_7)=0.3$, $w(v_9)=0.5$, $w(v_0)=0.12$, $w(v_6)=0.08$

$w(v_1)=0.06$, $w(v_4)=0.3$, $w(v_8)=0.05$, $w(v_5)=0.024$

so the maximum sum is 2.824