Week 5 Quiz [Fall 2019]

Instructions

Submission Guidelines

This assignment has multiple-choice and numeric response questions. Only one submission is allowed, however as long as the quiz is not submitted, it is automatically saved and can be resumed.

Upon submission, make sure you have a record of the submission (with timestamp) on the assignment/quiz page on Canvas. If we do not have your submission in Canvas, you will **not** receive credit.

It is essential to follow these instructions to provide answers for this assignment. **Students who do not follow these guidelines will lose points.**

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	15 minutes	9 out of 11

Score for this quiz: **9** out of 11
Submitted Sep 26 at 4:40pm
This attempt took 15 minutes.

Question 1   0 / 1 pts

Consider a network which has tree structure and N nodes. What is the maximum number of available paths between any two given nodes?

orrect Answer

○ 1

○ N

○ N(N-1) / N

ou Answered

⦿ Insufficient information - could vary depending on circumstances

Question 2

0 / 1 pts

In a bipartite network, what is the maximum number of connections?

○ n^2 / 4

○ N(N-1)/N

○ N^2

⊙ (N-1)(N-1)

Question 3

1 / 1 pts

What is a clique?

⊙ A complete subnetwork

○ The nodes in the network with the fewest connection

○ The nodes in the network with the most connections

○ Any subnetwork

Question 4

1 / 1 pts

A node without any edges is called

○ A singleton

○ An island

○ A sparse node

○ Nothing, nodes without edges should not be included in a network

Question 5

1 / 1 pts

Node ID	
1	4, 6, 8
2	4
3	6, 7, 8
4	1, 2, 5
5	4, 7, 8
6	1, 3
7	3, 5
8	1, 3, 5

Consider the above adjacency list.

Is it directed or undirected?

◉ Undirected

○ Directed

○

○

Question 6

1 / 1 pts

Again consider the above adjacency list.

Are there any cliques?

Correct!

⦿ No

◯ Yes

Question 7

1 / 1 pts

What layout is most commonly used within the algorithms for drawing networks?

Correct!

☑ Force-directed layout (aka Spring layout)

☐ Sparse layout (aka No Edge Overlap)

☐ Scattershot layout

☐ Forrest layout (aka Branching Trees)

Question 8

1 / 1 pts

Social networks as we know them today were formally defined in 1934 as:

Correct!

⦿ Sociograms

◯ Social maps

◯ Community maps

○ Census graphs

Question 9

1 / 1 pts

The above social networks introduced in 1934 studied

Correct!

⦿ Behavior of school children

○ Social interaction of soldiers returned from The Great War

○ Behavior among great apes living in Atlanta's zoo

○ Patterns of interactions among the faculty of NYU

Question 10

1 / 1 pts

Selection or homophily describe:

Correct!

⦿ Similar nodes becoming more connected

○ Similar nodes becoming more alike

○ Dissimilar nodes becoming more connected

○ Dissimilar nodes becoming more alike

Question 11

1 / 1 pts

Lei and all of Lei's friends on Facebook LOVE a specific brand of toothpaste,

and are passionate about singing its praises. Facebook is Lei's only trusted source of news.

Several news reports have come out revealing that this brand of toothpaste has been proven to contain a potentially dangerous ingredient, however, none of Lei's friends who see the news choose to share it, and the group continues to think and speak positively about the brand.

This is an example a phenomenon known in network science as:

Correct!

◉ Echo chambers / Group think

○ The Facebook Effect

○ Selection / Homophily

○ Self-inflicted propaganda

Quiz Score: **9** out of 11