Unit 10 - Week 4 - Homophily

Assignment 4

The due date for submitting this assignment has passed. **Due on 2019-08-28, 23:59 IST.**
As per our records you have not submitted this assignment.

1) *If two people in a social network have a friend in common, then there is an increased likelihood that they will become friends themselves at some point in the future.* **1 point**

The above principle is referred as

- Triadic closure
- Foci closure
- Membership closure
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Triadic closure

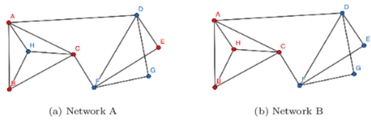
2) Two friends Simran and Soujanya like different set of food items. The set of food items Simran and Soujanya like is denoted by Si and So, respectively. Si has 17 elements whereas So has 21 elements and there are 12 items which are liked by both Simran and Soujanya ($Si \cup So$ = 12). What is the $similarity\ measure$ of Simran and Soujanya, with respect to food items. **1 point**

- 12/17
- 12/21
- 6/19
- 6/13

No, the answer is incorrect.
Score: 0

Accepted Answers:
6/13

3) Among the given two networks below, which network shows the better evidence of Homophily? **1 point**
(Nodes are divided into two types-represented by different colors)



(a) Network A (b) Network B

Figure 1

- Network A
- Network B
- Both exhibit equally
- Can't say

No, the answer is incorrect.
Score: 0

Accepted Answers:
Network B

4) Which phenomenon best describes the network evolution in Figure 2? **1 point**

Figure 2

- Homophily
- Triadic Closure
- Foci closure
- Membership closure

No, the answer is incorrect.
Score: 0

Accepted Answers:
Foci closure

5) Dynamics of friendships formation and behaviour of people in a network is **1 point**

- Impacted by neither selection and social influence
- Impacted by both, selection as well as social influence
- Impacted by selection but not social influence
- Impacted by social influence but not selection

No, the answer is incorrect.
Score: 0

Accepted Answers:
Impacted by both, selection as well as social influence

6) Consider figures A, B and C in Figure 3 and choose the right kind of closure they represent *(Please note that the solid line represents the existing friendship and the dotted line represents the new friendship.)*: **1 point**

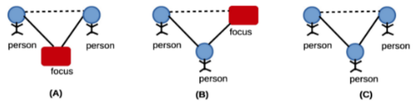


Figure 3: Closure

- A: Triadic closure, B: Membership closure, C: Focal closure
- A: Membership closure, B: Triadic closure, C: Focal closure
- A: Focal closure, B: Triadic closure, C: Membership closure
- A: Focal closure, B: Membership closure, C: Triadic closure

No, the answer is incorrect.
Score: 0

Accepted Answers:
A: Focal closure, B: Membership closure, C: Triadic closure

7) Consider the following two cases: **1 point**
Case 1: A and B become friends as they have n common friends.
Case 2: X and Y become friends as they have n common social foci
(where n is a large number) Choose the correct option from the following.

- Case 1 and Case 2 are equally probable
- Case 2 is more probable than Case 1
- Case 1 is more probable than Case 2
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Case 1 is more probable than Case 2

8) Suppose Monica and Chandler have k common friends. Given that each common friend gives Monica and Chandler an independent probability p of forming a link, what is the probability that there will exist a link between Monica and Chandler? **1 point**

- p^k
- $1-(1-p)\times k$
- $1-(1-p)^k$
- pk

No, the answer is incorrect.
Score: 0

Accepted Answers:
$1-(1-p)^k$