X

Week 11: Assignment 11

The due date for submitting this assignment has passed.

Due on 2022-10-12, 23:59 IST.

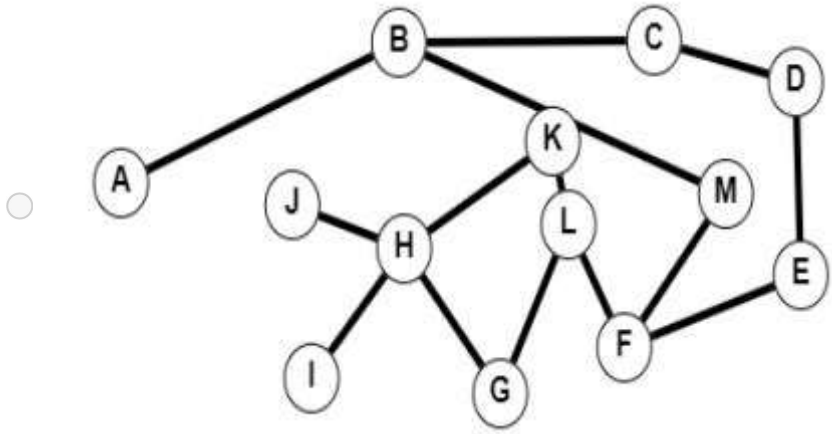
As per our records you have not submitted this assignment.

1) Which of the following option best describes the small world effect? ***1 point***

- Any two people are friends in the world.
- Most people are isolated in a friendship network.
- Any two people are connected in a friendship network with a small path length.
- Friendship network representing the world is small.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Any two people are connected in a friendship network with a small path length.

2) Which of the following graph can represent the friendship network of a neighbourhood? ***1 point***



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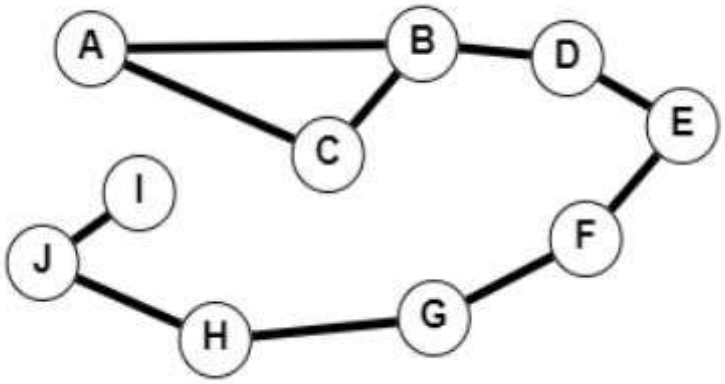
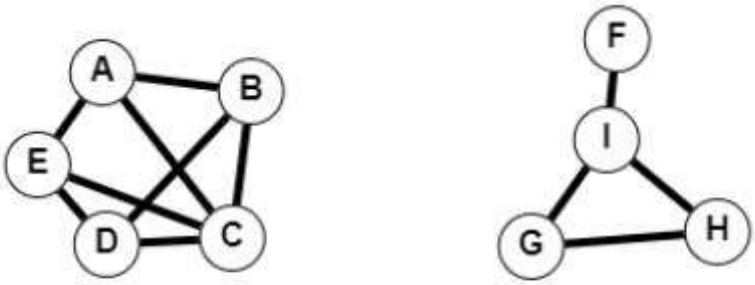
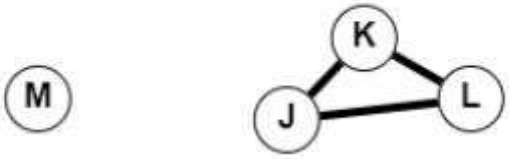
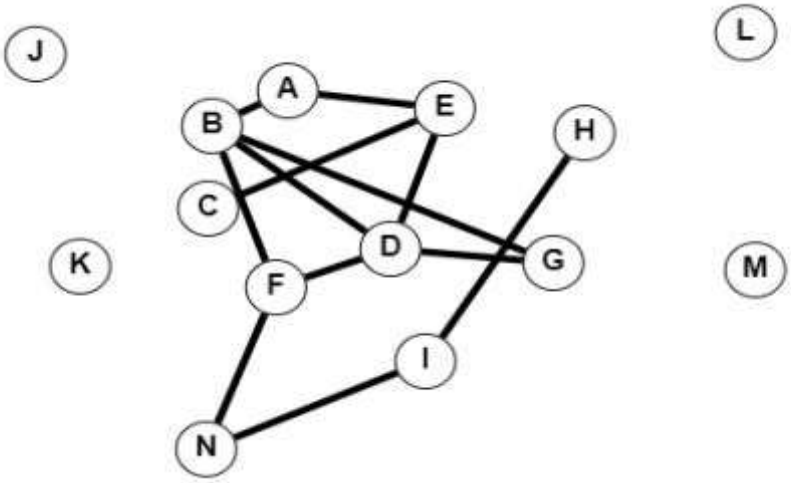


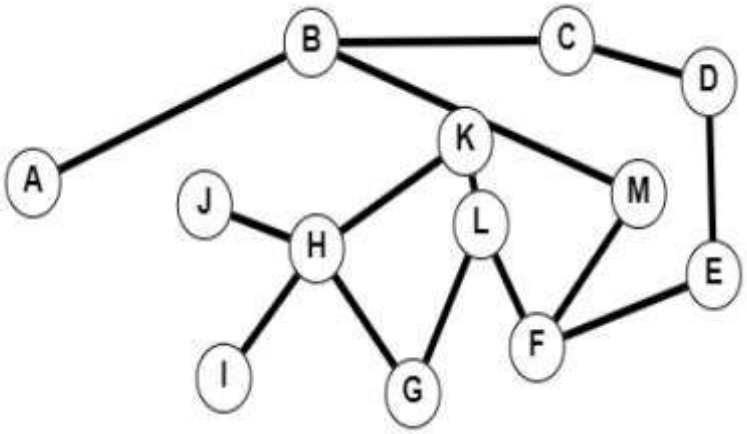






No, the answer is incorrect.
Score: 0

Accepted Answers:



3) Rahul has 6 friends. Each of his friends also has 6 other unique friends and so on. ***1 point***
How many people can Rahul reach within 3 hops(One hop is Rahul's immediate friends, 2nd hop is Rahul's friend's immediate friends and so on)?

- 36
- 258
- 216
- 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
258

4) Which of the following is the reason for the grid in friendship networks? ***1 point***

I. Homophily
II. weak ties
III. Rich get richer phenomenon

- Only I
- Only II
- Only I, II
- Only II, III

No, the answer is incorrect.
Score: 0

Accepted Answers:
Only I

5) Ram creates a graph on networkx where he makes a 2d lattice and connects the nodes that are adjacent to each other through an edge. After doing so he randomly rewires a few of the edges with a probability of 0.02. What should be the average path length between any two nodes in this graph? ***1 point***

- 10
- 2
- 6
- 14

No, the answer is incorrect.
Score: 0

Accepted Answers:
6

6) In a friendship network, the edges which are not in your neighbourhood and connect you to friends from distant regions represent - ***1 point***

- strong ties
- Homophily
- weak ties
- social influence

No, the answer is incorrect.
Score: 0

Accepted Answers:
weak ties

7) In a friendship network, suppose Ram wants to reach Andrew through the shortest path between them. Ram has four friends - Raman, Raghav, George and Ashraf. Andrew's distance from Raman, Raghav, George and Ashraf is 10, 4, 6 & 9 respectively. If we chose the path to Andrew using decentralized search then the path to Andrew goes through which of his immediate friend of Ram? ***1 point***

- Raman
- Raghav
- George
- Ashraf

No, the answer is incorrect.
Score: 0

Accepted Answers:
Raghav

8) In a friendship graph, the distance between Ram and Andrew is 20. If we create edges according to the Watts-Strogatz model given k=2, what is the probability of them being friends through a weak tie? ***1 point***

- 1
- 0.05
- 0.0025
- 0.08

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.0025

9) Which of the following option is false in a small world effect? ***1 point***

- Every two people are connected with a path.
- The average path length between any 2 people is 6.
- People only form friendships within their neighbourhood.
- We can attribute this phenomenon to weak ties and Homophily.

No, the answer is incorrect.
Score: 0

Accepted Answers:
People only form friendships within their neighbourhood.

10) Which of the following observation is correct according to Milgram's experiment? ***1 point***

- Letter reached the destination within a small no of hops.
- Letter didn't reach the destination.
- Letter reached the destination within a large no of hops.
- Letter reached the destination in one hop.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Letter reached the destination within a small no of hops.