

# Social Networks

## Question Bank for End Sem Examination

1. How do we represent a Social Network on Internet ? Explain with an example.
2. List out the basic features of Internet Identities (IId) ? Give some examples that can be used as Internet Identities by the system.
3. How the data on network is handled ? Explain Real-world Network Datasets and their formats.
4. Write about "Who talks to whom" graph.
5. Write about weak ties and their significance.
6. Define triadic closure, member closure and focus closure.
7. Discuss the influence of homophily on social networks with an appropriate example.
8. Explain Collaboration Graph and Who-talks-to-Whom Graphs.
9. What do you mean by Technological Networks also Explain which Networks are present in the Natural World.
10. What are the causes and effects of homophily ?
11. Define Graphs, Nodes and Edges. Also Explain Graphs as Models of Networks.

12. What are the disadvantages (limitations) of Social Network on Internet ?
13. Explain about information linkage graph.
14. What are the benefits of link analysis ?
15. What is centrality ? What are the different types of centralities ?
16. What are the clusters ? How they are identified on social networks ? Also explain how to calculate cluster coefficient ?
17. What is Triadic Closure? What are the Reasons for Triadic Closure?
18. Explain Structural Balance and how to define Structural Balance for Networks?
19. What do you mean by Bridges and Local Bridges?
20. Explain Page Rank .What is Equilibrium value of page rank.
21. Explain Spectral Analysis of Hubs and Authorities
22. What are Cascades and Clusters .Explain Relationship between them.
23. How does the branching process works
24. What is a power law ? Explain with an appropriate example. How do we detect the presence of power law.
25. Explain Rich get Richer phenomenon with an appropriate example.

26. Explain about SIR/SIS Epidemic model.
27. "We are all linked by short chains of acquaintances", or "six degrees of separation". How do you support this principle ? Explain with an example.
28. What is Watts-Strogatz model ? Discuss about it.
29. What is decentralized Search. Explain Model of Decentralized Search.
30. Discuss about the core-periphery structure of social networks
31. What is a complete graph? What is the density of complete graph?
32. Define Embeddedness, Structural Holes and Social Capital ?
33. How to Find Embeddedness between two vertices ? What is homophily? How the presence of homophily is determined.
34. What is spatial Segregation ? Explain The Schelling Model for spatial segregation.
35. Define structural balance.
36. What is cascading effect?
37. What are the Hubs and Authorities ? Explain the principle of repeated improvements.
38. Compare Myopic search and optimal search
39. Explain the small world phenomenon.

----- *Wish you all the Best* -----