SRM Institute of Science and Technology
NCR campus Modinagar
Department of Computer Science and Engineering
CSE 6th Semester
Subjective Question Bank (Unit 3)

Subject: Network Routing Algorithms (18CSE453T)

Short Question

1. Define basic principle of Bellman ford Algorithm with example.
2. Discuss distance vector routing approach in details.
3. Compare with Bellman ford Algorithm and distance vector routing Algorithm
4. Describe Distance Vector Approach in detail.
5. What is Bellman Ford Algorithm ? Give example.
6. Differentiate between Bellman-Ford Algorithm and Distance Vector Approach.

7. What are the main differences between shortest path routing and widest path routing?
8. Identify networking environments where path caching might be helpful that requireeither the shortest path or the widest path computation.
9. Write down the Bellman Ford's approach for Widest path routing?
10. Discuss about k-shortest path algorithm.
11. What basic procedures should a routing algorithm perform?
12. How Routing table Works?
13. Write the difference between interior and exterior gateway protocol?
14. What is RIP Protocol?
15. What is the Advantage of RIP?
16. What is the Disadvantage of RIP?
17. What is link state routing?
18. Compare distance-vector and link-state routing protocols.
19. What are the advantages of link-state routing compared to distance-vector routing?
20. When does the use of RIP lead counting infinity?
21. What countermeasures for routing loops can be built into distance vector protocol?
22. Give the Bellman-Ford algorithm.
23. Explain Single-commodity Network Flow.

24. Explain Multi-commodity Network Flow.
25. Differentiate between maximum flow & minimum flow.

Long Question

26. List out Various Routing algorithm and explain any one in details.
27. Describe Dijkstra's Algorithm with the help of suitable example.
28. Discuss Shortest Path Computation with Candidate Path Caching Algorithm.
29. Consider the following graph. Assume that all the numbers represent the bandwidth. Determine the widest path from node 1 to 5 using path caching approach.
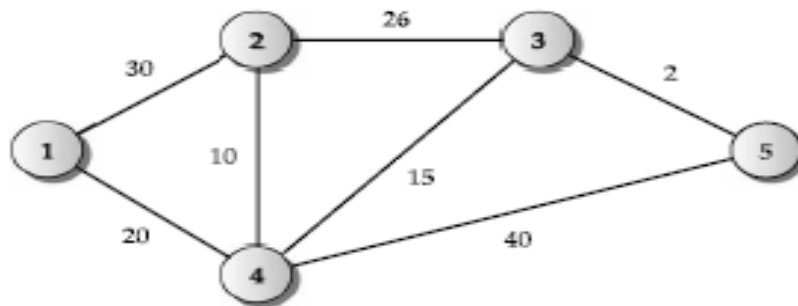
30. Explain the classification of Routing Algorithm in detail?
31. How does the Routing Information Protocol (RIP) work?
32. Enumerate the basic characteristics of RIP.
33. Illustrate the principle of Internet routing based on the link state approach.
34. Illustrate the algorithm for distributing the link states in link-state routing.
35. How is the fractioned network re-united in link-state routing?
36. What actions can be taken to ensure the integrity of the link-state databases in link-state routing?
37. Illustrate the Dijkstra algorithm of shortest-path-first without alternative paths.
38. Explain the concept of area in OSPF.
39. Illustrate the use of OSPF's network-LSA in reducing the size of the link-state database.
40. Describe the Distance vector routing protocol with examples.
41. Discuss the principles of reliable flooding and its advantages and applications.
42. State the major difference between Distance Vector Routing and Link State Routing. Discuss how these routing techniques work.
43. Describe the working of path vector protocol with an example.

44. Explain network flow modelling in detail with comparison of both of the types.