

Question Bank

Course: Computer Networks

Course Code: 21CSE502

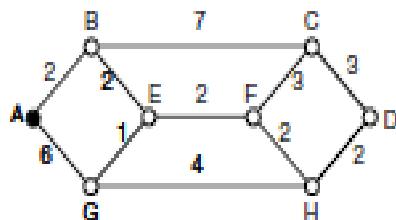
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MODULE – 1

1. Define computer network. Briefly describe the uses of computer network.
2. What are the two technical issues in network hardware design. Explain.
3. Explain the categories of network with suitable diagram and example.
4. Differentiate LAN WAN and MAN
5. List and explain the categories of network hardware based on scale.
6. Write a note on
 - i) Internetworking
 - ii) Protocol Hierarchy
5. List and explain the design issues in network software design.
6. Differentiate between connection oriented and connectionless service.
7. Differentiate between TCP and UDP
8. With a neat diagram explain OSI reference model. Explain the functions of each layer.
9. Briefly explain TCP/IP reference model.
10. Differentiate between OSI reference model and TCP/IP model

MODULE – 2

1. Define Routing. Write the difference between routing and forwarding
2. Describe optimality Principle? Solve the following to find the shortest path from A to D using Dijkstra's algorithm. (any graph can be given)



3. Explain how broadcasting is achieved in Reverse Path Forwarding. Write the advantages and disadvantages.
4. Write Bellman-Ford Algorithm. Explain the algorithm with an example.
5. Define congestion in network. Give the different approaches to control the congestion.
6. Write a note on Load Shedding and flooding.
7. Discuss about the drawback of distance vector algorithm and how this can be resolved.
8. Explain Hierarchical routing in network.

- 9. Write a note on multicast routing and routing in ad-hoc networks**
- 10. Describe the steps involved in sending packets in mobile networks**
- 11. Explain steps involved in Link state algorithm.**

MODULE – 3

1. Define quality of service in networking. Explain the primary parameters which defines the QOS.
2. List and explain the techniques for Achieving Good Quality of Service.
3. Describe traffic shaping with algorithms.
4. Explain leaky bucket and token bucket algorithms.
5. Differentiate between leaky bucket and token bucket algorithms.
6. Explain why packet scheduling is required? Describe the different strategies for packet scheduling.
7. Give the Structure of IPv4 header and explain all the fields.
8. With a neat diagram explain the classful addressing.
9. Describe the subnet addressing with an example.
10. Describe the CIDR with an example.
11. Give the Structure of IPv6 header and explain all the fields.
12. Explain BGP
13. Explain OSPF

MODULE – 4

1. Explain the services provided by the transport layer to the upper layers.
2. Explain transport primitives.
3. Explain the three way handshake protocol used for connection establishment and connection release with neat diagrams.
4. Explain TCP IP socket programming.
5. Explain the User Datagram Protocol with header format.
6. Differentiate between TCP and UDP
7. Explain the TCP segment header with a neat diagram.
8. Explain how flow control and error control is achieved at the transport layer
9. Explain TCP connection establishment.
10. Explain how you can avoid congestion in TCP.
11. Explain TCP transmission policy.

MODULE – 5

1. Describe the different query mechanisms used to resolve name in DNS.
2. Describe the Hyper Text Transfer Protocol
3. Give the architecture of electronic mail. Explain SMTP.
4. Explain the message format of email.
5. Explain the server side communication in WWW(architecture).
6. Write a note on URL
7. Describe MIME—The Multipurpose Internet Mail Extensions along with its header information.
8. Compare POP3 and IMAP.
9. With a neat diagram explain the parts of the Web model.

10. Explain the different HTTP request methods used in creating HTTP message.